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United States Patent [19]

Schnabel et al.

[11] **Patent Number:** 5,723,409[45] **Date of Patent:** Mar. 3, 1998[54] **INTERMEDIATES FOR THE PREPARATION OF PHENYLSULFONYLUREA HERBICIDES AND PLANT GROWTH REGULATORS**[75] **Inventors:** Gerhard Schnabel, Grosswallstadt; Lothar Willms, Hillscheid; Klaus Bauer, Hanau; Hermann Bieringer, Eppstein/Taunus, all of Germany[73] **Assignee:** Hoechst Schering AgrEvo GmbH, Berlin, Germany[21] **Appl. No.:** 430,343[22] **Filed:** Apr. 28, 1995**Related U.S. Application Data**[63] **Continuation-in-part of Ser. No. 144,895, Oct. 28, 1993, Pat. No. 5,449,812.**[30] **Foreign Application Priority Data**

Oct. 31, 1992 [DE] Germany 42 36 902.9

[51] **Int. Cl.⁶** C07D 239/64; C07D 401/12; A01N 43/54[52] **U.S. Cl.** 504/214; 504/215; 544/321; 544/333; 544/238; 544/295; 544/296; 544/323; 544/324; 544/331; 544/332; 544/122; 544/123[58] **Field of Search** 504/214, 215; 544/321, 333, 238, 295, 296, 323, 324, 331, 332, 122, 123[56] **References Cited****U.S. PATENT DOCUMENTS**

4,632,695	12/1986	Schurter et al.	71/93
4,664,695	5/1987	Schurter et al.	71/92
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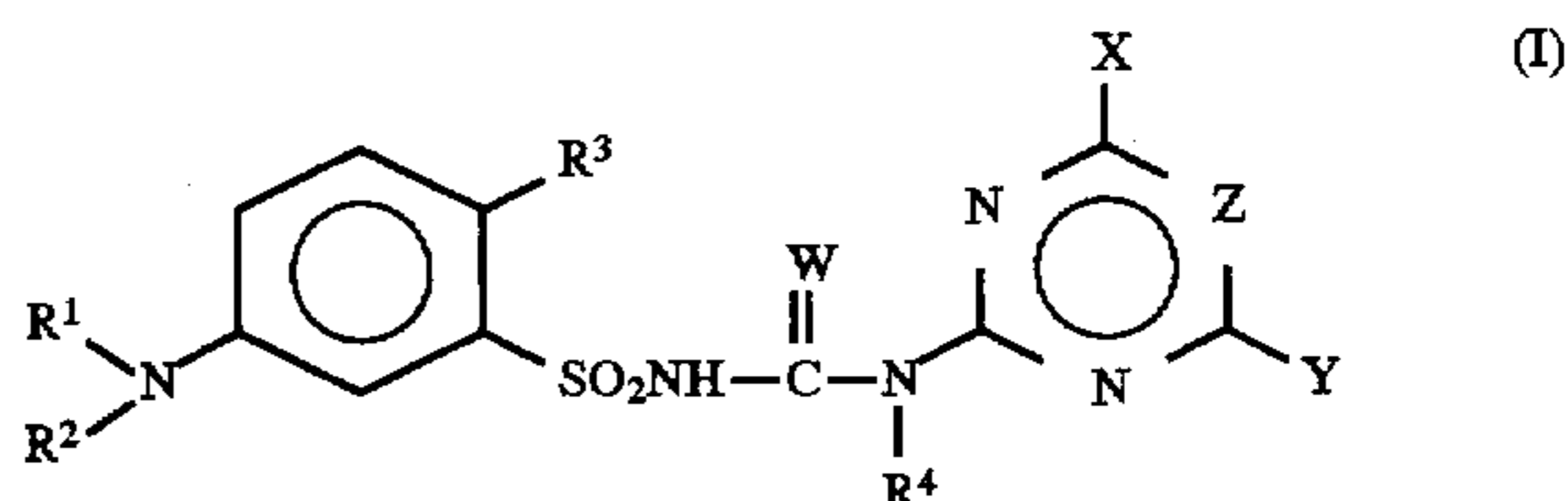
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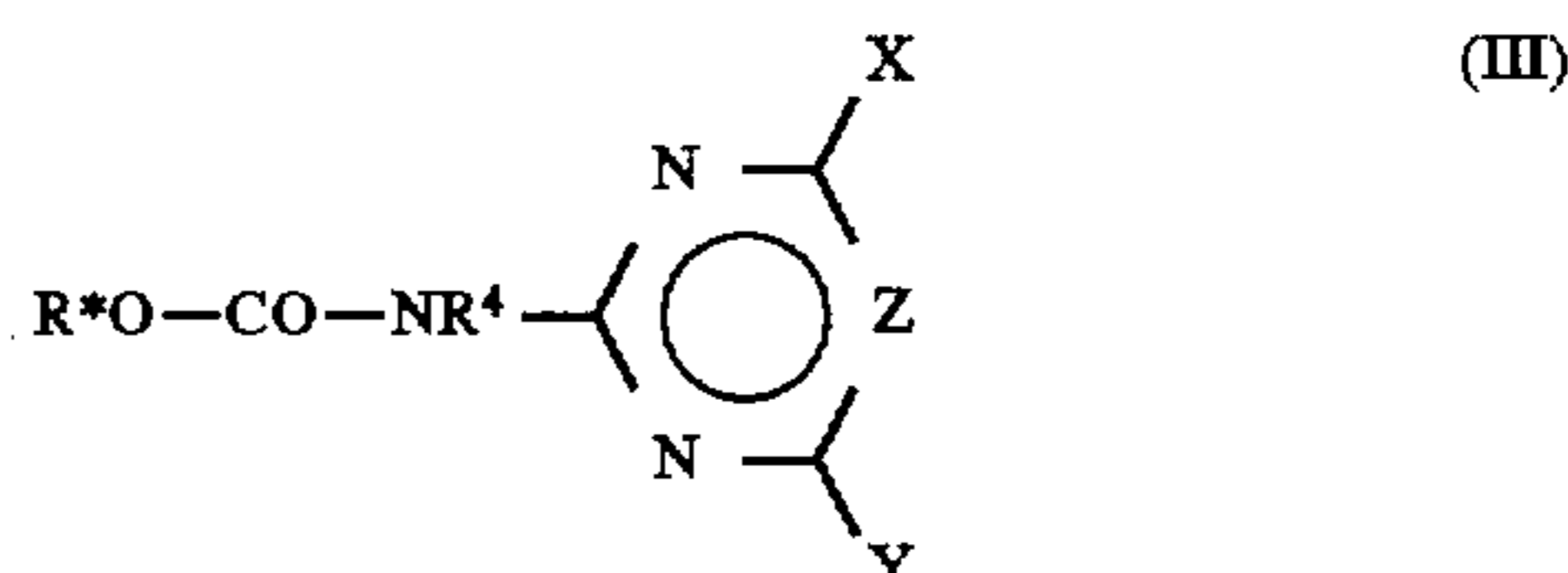
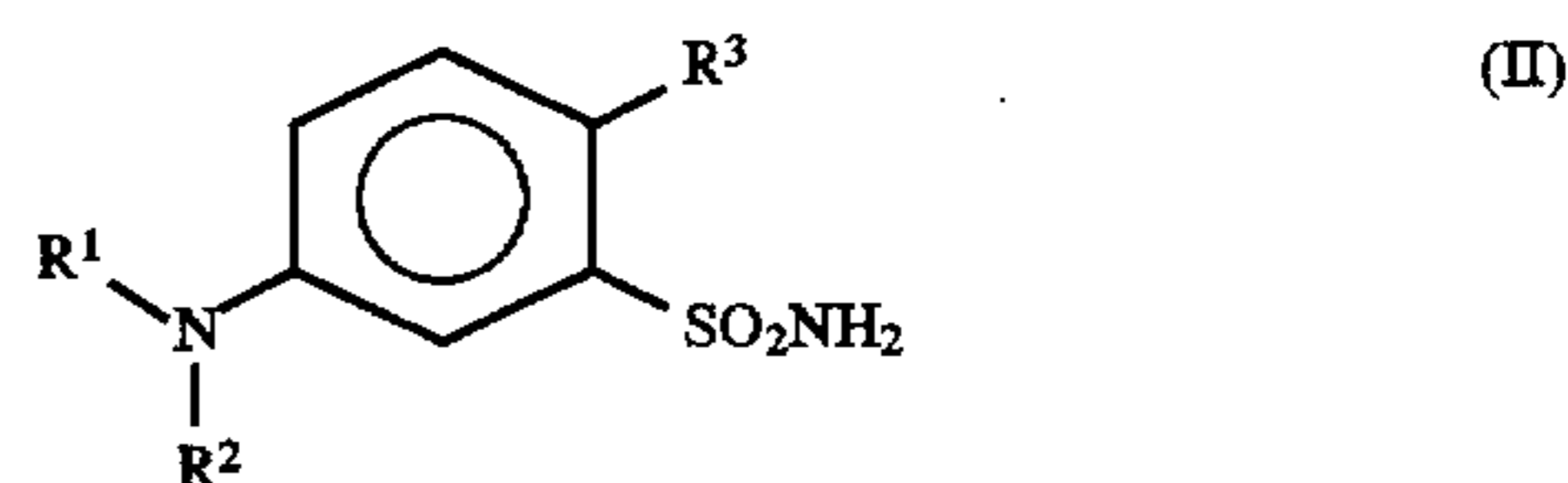
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Loev et al., *J. Org. Chem.*, vol. 27 (1962) pp. 2177-2180.*Primary Examiner*—John M. Ford*Attorney, Agent, or Firm*—Frommer, Lawrence & Haug LLP[57] **ABSTRACT**

The compounds of the formula (I)



in which R¹-R⁴, W, X, Y and Z are as defined in claim 1 are suitable for controlling harmful plants in crops. Their preparation may employ the intermediates of the formulae II and III:

**7 Claims, No Drawings**

**INTERMEDIATES FOR THE PREPARATION
OF PHENYLSULFONYLUREA HERBICIDES
AND PLANT GROWTH REGULATORS**

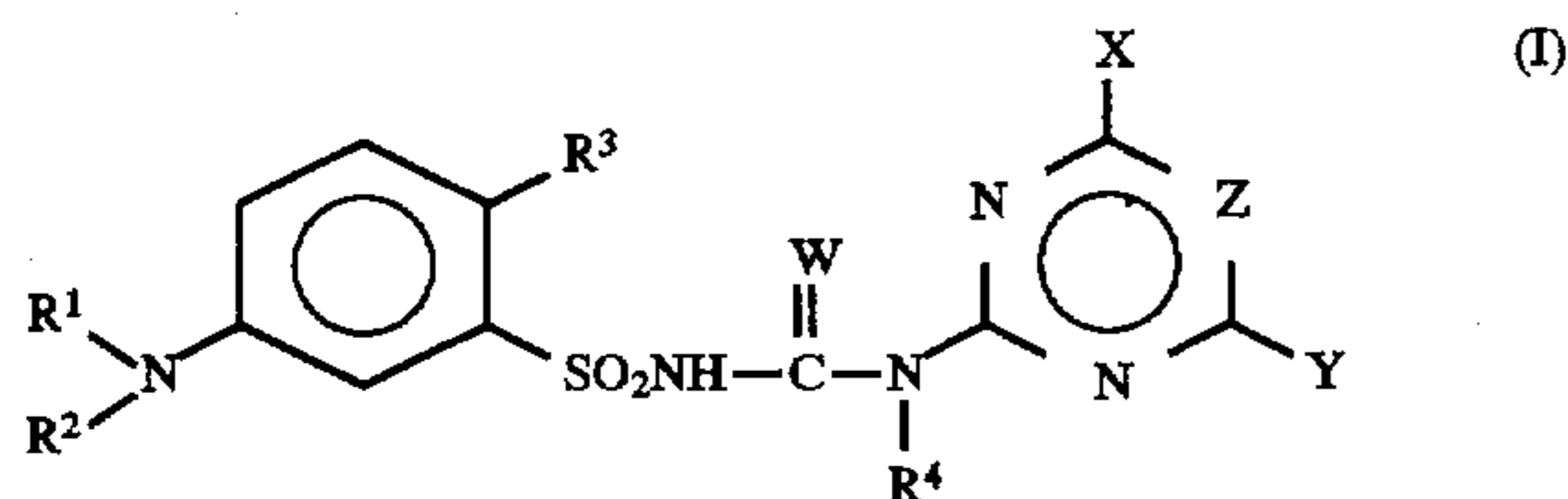
This application is a continuation-in-part of application Ser. No. 08/144,895, filed Oct. 28, 1993, now U.S. Pat. No. 5,449,812, the disclosure of which application is expressly incorporated herein by reference.

The invention relates to the technical field of herbicides and plant growth regulators, especially herbicides for the selective control of gramineous and other weeds in crops.

It is known that phenylsulfonylureas which are substituted by heterocycles and carry on the phenyl ring an amino group which may be functionalized possess herbicidal and plant growth-regulating properties (EP-A-1 515, U.S. Pat. No. 4,892,946; U.S. Pat. No. 4,981,509; EP-A-116 518, U.S. Pat. No. 4,664,695 and U.S. Pat. No. 4,632,695).

It has now been found that, surprisingly, certain phenylsulfonylureas substituted by heterocycles are particularly highly suitable as herbicides or plant growth regulators.

The present invention relates to compounds of the formula (I) or salts thereof



in which

R^1 is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_4 -alkoxy, $CONH_2$, C_1-C_4 -alkylthio, CN, CHO, (C_1-C_6 -alkyl) carbonyl, (C_3-C_6 -cycloalkyl)carbonyl, C_1-C_4 -alkylsulfonyl, carboxyl, (C_1-C_4 -alkoxy)carbonyl, (C_2-C_4 -alkenyloxy)carbonyl, (C_2-C_4 -alkynyloxy)carbonyl, NO_2 , NH_2 , mono- and di- (C_1-C_6)-alkylamino,

R^2 is $CO-R^5$, $COO-R^6$, $CO-SR^7$, $CO-NR^8R^9$, $CS-NR^{10}R^{11}$, $CS-OR^{12}$, $CS-SR^{13}$, SO_2R^{14} , $SO_2NR^{15}R^{16}$,

R^3 is COR^{17} , $CO-OR^{18}$, $CO-NR^{19}R^{20}$, $CO-SR^{21}$, $CO-O-N=CR^{22}R^{23}$, CSR^{24} , $CSSR^{25}$, $CS-OR^{26}$, $CS-NR^{27}R^{28}$, $C(=NR^{29})R^{30}$,

R^4 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more halogen radicals,

R^5 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or unsubstituted or substituted C_3-C_6 -cycloalkyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl or phenyl- C_1-C_4 -alkyl which is unsubstituted or substituted on the phenyl ring,

R^6 is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or C_3-C_6 -cycloalkyl which is unsubstituted or substituted by one or more

radicals from the group comprising halogen, C_1-C_4 -alkyl and C_1-C_4 -alkoxy, or C_3-C_6 -cycloalkyl- C_1-C_3 -alkyl,

R^7 is analogous to R^6

R^8 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, or (C_1-C_6 -alkoxy) carbonyl or C_1-C_4 -alkoxy,

R^9 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or $CO-R^{33}$, $CO-OR^{34}$, $CO-NR^{35}R^{36}$, $CS-NR^{35}R^{36}$, $CS-R^{33}$ or $CS-OR^{34}$, or

R^8, R^9 taken together are a divalent radical of the formula $-(CH_2)_4-$, $-(CH_2)_5-$, $-CH_2CH_2-O-CH_2CH_2-$, $-CH_2CH_2NHCH_2CH_2-$, the 4 latter radicals being unsubstituted or substituted by C_1-C_4 -alkyl,

R^{10} is analogous to R^8 ,

R^{11} is analogous to R^9 ,

R^{12} is analogous to R^6 ,

R^{13} is analogous to R^6 ,

R^{14} is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$,

R^{15} is analogous to R^8 ,

R^{16} is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more halogen radicals,

R^{17} is analogous to R^5 ,

R^{18} is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or C_3-C_6 -cycloalkyl which is unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_4 -alkyl and C_1-C_4 -alkoxy, or C_3-C_6 -cycloalkyl- C_1-C_3 -alkyl or H,

R^{19} is analogous to R^8 ,

R^{20} is analogous to R^9 ,

R^{21} is analogous to R^{18} ,

R^{22} is H, C_1-C_4 -alkyl, C_3-C_5 -alkenyl or C_3-C_5 -alkynyl,

R^{23} is H, C_1-C_4 -alkyl, C_3-C_5 -alkenyl or C_3-C_5 -alkynyl,

R^{24} is analogous to R^{17} ,

R^{25} is analogous to R^{18} ,

R^{26} is analogous to R^{18} ,

R^{27} is analogous to R^8 ,

R^{28} is analogous to R^9 ,

R^{29} is H, OH, NHR^{37} , $N(R^{37})_2$, C_1-C_4 -alkyl, C_1-C_4 -alkoxy, C_2-C_4 -alkenyl or C_2-C_4 -alkynyl, the 4 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1-C_3 -alkoxy and C_1-C_3 -alkylthio,

R^{30} is H, C_1-C_6 -alkyl, C_1-C_6 -alkoxy, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the four latter radicals independently of

one another being unsubstituted or substituted by one or more radicals from the group comprising halogen, C₁-C₃-alkoxy and C₁-C₃-alkylthio,

each

R³¹ independently of the others is H, C₁-C₄-alkyl, (C₁-C₄-alkyl)carbonyl, (C₁-C₄-alkoxy)carbonyl or CHO,

each

R³² independently of the others is H or C₁-C₄-alkyl,

R³³ is analogous to R⁵,

R³⁴ is analogous to R⁶,

R³⁵, R³⁶ independently of one another are H, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more halogen radicals,

R³⁷ is C₁-C₄-alkyl, C₂-C₄-alkenyl or C₂-C₄-alkynyl, the three radicals mentioned, independently of one another, being unsubstituted or substituted by one or more radicals from the group comprising halogen, C₁-C₄-alkoxy and C₁-C₄-alkylthio,

W is O or S,

X and Y independently of one another are hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy or C₁-C₆-alkylthio, the three latter radicals being unsubstituted or substituted by one or more radicals from the group comprising halogen, C₁-C₄-alkoxy and C₁-C₄-alkylthio, or mono- or di-(C₁-C₄-alkyl)amino, C₃-C₆-cycloalkyl, C₃-C₅-alkenyl, C₃-C₅-alkenyloxy or C₃-C₅-alkynyloxy, and

Z is CH or N.

In the formula (I) and below, each of the radicals alkyl, alkoxy, haloalkyl, haloalkoxy, alkylamino and alkylthio, and the corresponding unsaturated and/or substituted radicals may be straight-chain or branched in the carbon structure. If not indicated specifically, the carbon structures having from 1 to 4 carbon atoms or, in the case of unsaturated groups, having from 2 to 4 carbon atoms are preferred for these radicals. Examples of alkyl radicals, including those in the composite definitions such as alkoxy, haloalkyl etc., are methyl, ethyl, n- or i-propyl, n-, i-, t- or 2-butyl, pentyls, hexyls such as n-hexyl, i-hexyl and 1,3-dimethylbutyl, heptyls such as n-heptyl, 1-methylhexyl and 1,4-dimethylpentyl; alkenyl and alkynyl radicals have the meaning of the unsaturated radicals corresponding, where possible, to the alkyl radicals, examples of alkenyl are allyl, 1-methylprop-2-en-1-yl, 2-methylprop-2-en-1-yl, but-2-en-1-yl, but-3-en-1-yl, 1-methylbut-3-en-1-yl, 1-methylbut-2-en-1-yl and 1-methylbut-2-en-1-yl; examples of alkynyl are propargyl, but-2-yn-1-yl, but-3-yn-1-yl and 1-methylbut-3-yn-1-yl.

Halogen is fluorine, chlorine, bromine or iodine. Haloalkyl, haloalkenyl and haloalkynyl are respectively alkyl, alkenyl and alkynyl which are partially or completely substituted by halogen, preferably by fluorine, chlorine and/or bromine and in particular by fluorine or chlorine; examples are CF₃, CHF₂, CH₂F, CF₃CF₂, CH₂FCHCl, CCl₃, CHCl₂, CH₂CH₂Cl; examples of haloalkoxy are OCF₃, OCHF₂, OCH₂F, CF₃CF₂O, OCH₂CF₃ and OCH₂CH₂Cl. This applies correspondingly to haloalkenyl and other halo-substituted radicals.

Aryl is a mono-, bi- or polycyclic aromatic system, for example phenyl, naphthyl, tetrahydronaphthyl, indenyl, indanyl, pentalenyl, fluoranyl and the like, preferably phenyl; aryloxy preferably comprises the oxy radicals corresponding to the aryl radicals mentioned, in particular phenoxy.

Heteroaryl is a mono-, bi- or polycyclic aromatic system in which at least 1 ring contains one or more heteroatoms, for example pyridyl, pyrimidinyl, pyridazinyl, pyrazinyl, thienyl, thiazolyl, oxazolyl, furyl, pyrrolyl, pyrazolyl and imidazolyl, but also bicyclic or polycyclic aromatic or araliphatic compounds, e.g. quinolinyl, benzoxazolyl etc.

A substituted aryl, heteroaryl, phenyl, benzyl or substituted bicyclic radical containing aromatic structures is, for example, a substituted radical derived from the unsubstituted parent structure, examples of substituents being one or more radicals, preferably 1, 2 or 3 radicals from the group comprising halogen, alkyl, haloalkyl, alkoxy, haloalkoxy, alkylthio, hydroxyl, amino, nitro, cyano, alkoxy-carbonyl, alkylcarbonyl, formyl, carbamoyl, mono- and dialkylaminocarbonyl, mono- and dialkylamino, alkylsulfinyl and alkylsulfonyl and, in the case of radicals containing carbon atoms, those having from 1 to 4 carbon atoms, in particular 1 or 2 carbon atoms, being preferred. Preferred substituents in general are those from the group comprising halogen, e.g. fluorine and chlorine, C₁-C₄-alkyl, preferably methyl or ethyl, C₁-C₄-haloalkyl, preferably trifluoromethyl, C₁-C₄-alkoxy, preferably methoxy or ethoxy, C₁-C₄-haloalkoxy, nitro and cyano. Particularly preferred substituents are methyl, methoxy and chlorine.

Substituted or unsubstituted phenyl is, for example, phenyl which is unsubstituted or substituted once or more than once, preferably up to three times, by identical or different radicals from the group comprising halogen, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy and nitro, e.g. o-, m- and p-tolyl, dimethylphenyls, 2-, 3- and 4-chlorophenyl, 2,3,4-trifluoro- and -trichlorophenyl, 2,4-, 3,5-, 2,5- and 2,3-dichlorophenyl, o-, m- and p-methoxyphenyl.

A heteroaromatic radical or heterocyclic radical preferably has 5 or 6 members and contains 1, 2 or 3 heteroatoms, preferably from the group comprising N, O and S. The radical may be benzo-fused. Suitable radicals are those such as oxiranyl, pyrrolidinyl, piperidyl, dioxolanyl, pyrazolyl, morpholyl, furyl, tetrahydrofuryl, indolyl, quinolinyl, pyrimidyl, azepinyl, imidazolyl, triazolyl, thienyl and oxazolyl.

The invention also relates to all the stereoisomers encompassed by formula (I), and mixtures thereof. These compounds of the formula (I) contain one or more asymmetric carbon atoms or double bonds which are not indicated specifically in the formula (I). Formula (I) encompasses all the stereoisomers defined by their specific spatial orientation, such as enantiomers, diastereomers, Z- and E-isomers, all of which can be prepared by conventional methods from mixtures of the stereoisomers or else by stereoselective reactions in combination with the use of stereochemically pure starting substances.

The compounds of the formula (I) may form salts in which the hydrogen of the —SO₂—NH— group or else another acidic hydrogen atom (e.g. from COOH etc.) is replaced by a cation which is suitable for agriculture. Examples of these salts are metal salts, in particular alkali metal or alkaline earth metal salts, or else ammonium salts or salts with organic amines. The formation of a salt can also take place by the addition of an acid to basic groups such as amino and alkylamino. Suitable acids in this respect are strong inorganic and organic acids, for example HCl, HBr, H₂SO₄ or HNO₃.

Primarily for reasons of greater herbicidal activity, improved selectivity and/or increased ease of preparation, compounds of the formula (I) or salts thereof of particular interest are those in which

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R^1 is C_1 - C_4 -alkyl, C_2 - C_4 -alkenyl or C_2 - C_4 -alkynyl, preferably C_1 - C_4 -alkyl, allyl or propargyl, or
 R^2 is $CO-R^5$, $COOR^6$, $CO-NR^8R^9$, $CS-NR^{10}R^{11}$, SO_2R^{14} or $SO_2NR^{15}R^{16}$, or
 R^3 is COR^{17} , $COOR^{18}$, $CONR^{19}R^{20}$ or $CO-ON=CR^{22}R^{23}$, preferably $COOR^{18}$, or
 R^4 is H or C_1 - C_4 -alkyl, preferably H or methyl, or
 R^5 is H, C_1 - C_6 -alkyl which is unsubstituted or substituted by one or more radicals from the group comprising halogen, or by C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio or $NR^{31}R^{32}$, or C_3 - C_6 -cycloalkyl, unsubstituted or substituted phenyl, unsubstituted or substituted benzyl or unsubstituted or substituted heteroaryl, preferably H, C_1 - C_6 -alkyl, C_1 - C_4 -haloalkyl, cyclopropyl, cyclopentyl, cyclohexyl, phenyl or heteroaryl, the two latter radicals being unsubstituted or substituted by one or more radicals from the group comprising C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy and halogen, or
 R^6 is C_1 - C_6 -alkyl, C_2 - C_6 -alkenyl, C_2 - C_6 -alkynyl, C_1 - C_6 -haloalkyl or C_3 - C_6 -cycloalkyl, preferably C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, allyl, propargyl or C_3 - C_6 -cycloalkyl, or
 R^7 is C_1 - C_4 -alkyl,
 R^8 is hydrogen, C_1 - C_6 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or $(C_1$ - C_4 -alkoxy)carbonyl,
 R^9 is hydrogen, C_1 - C_6 -alkyl which is unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1 - C_4 -alkoxy and $NR^{31}R^{32}$, or $CO-R^{33}$, $CO-OR^{34}$ or $CO-NR^{35}R^{36}$, or
 R^8 and R^9 taken together are a divalent radical of the formula $-(CH_2)_4-$, $-(CH_2)_5-$ or $-CH_2CH_2-O-CH_2CH_2-$, or
 R^{14} is C_1 - C_6 -alkyl or C_1 - C_6 -haloalkyl, preferably C_1 - C_4 -alkyl or C_1 - C_4 -haloalkyl, or
 R^{15} , R^{16} independently of one another are hydrogen or C_1 - C_4 -alkyl, or
 R^{17} is hydrogen or C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_3 - C_6 -cycloalkyl, phenyl or heteroaryl, the two latter radicals being unsubstituted or substituted, or
 R^{18} is hydrogen, C_1 - C_4 -alkyl, C_2 - C_6 -alkenyl or C_2 - C_6 -alkynyl, the 3 latter radicals being unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1 - C_4 -alkoxy, C_1 - C_4 -alkylthio and $NR^{31}R^{32}$, or C_3 - C_6 -cycloalkyl or C_3 - C_6 -cycloalkyl- C_1 - C_3 -alkyl, or
 R^{22} is hydrogen or C_1 - C_2 -alkyl, or
 R^{23} is hydrogen or C_1 - C_2 -alkyl, or
 R^{29} is hydrogen, hydroxyl, amino, $NHCH_3$, $N(CH_3)_2$, C_1 - C_4 -alkyl or C_1 - C_4 -alkoxy,
 R^{30} is hydrogen or C_1 - C_4 -alkyl, or
each
 R^{31} independently of the others is H or C_1 - C_4 -alkyl, or
each
 R^{32} independently of the others is H or C_1 - C_4 -alkyl, or
 R^{33} is hydrogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_3 - C_6 -cycloalkyl or phenyl which is unsubstituted or substituted by one or more radicals from the group comprising halogen, C_1 - C_4 -alkyl and C_1 - C_4 -alkoxy, or
 R^{34} is C_1 - C_4 -alkyl, allyl, propargyl or cycloalkyl, or
 R^{35} is hydrogen or C_1 - C_4 -alkyl, or
 R^{36} is hydrogen or C_1 - C_4 -alkyl, or
X is C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkylthio, halogen or mono- or di- $(C_1$ - C_2 -alkyl)

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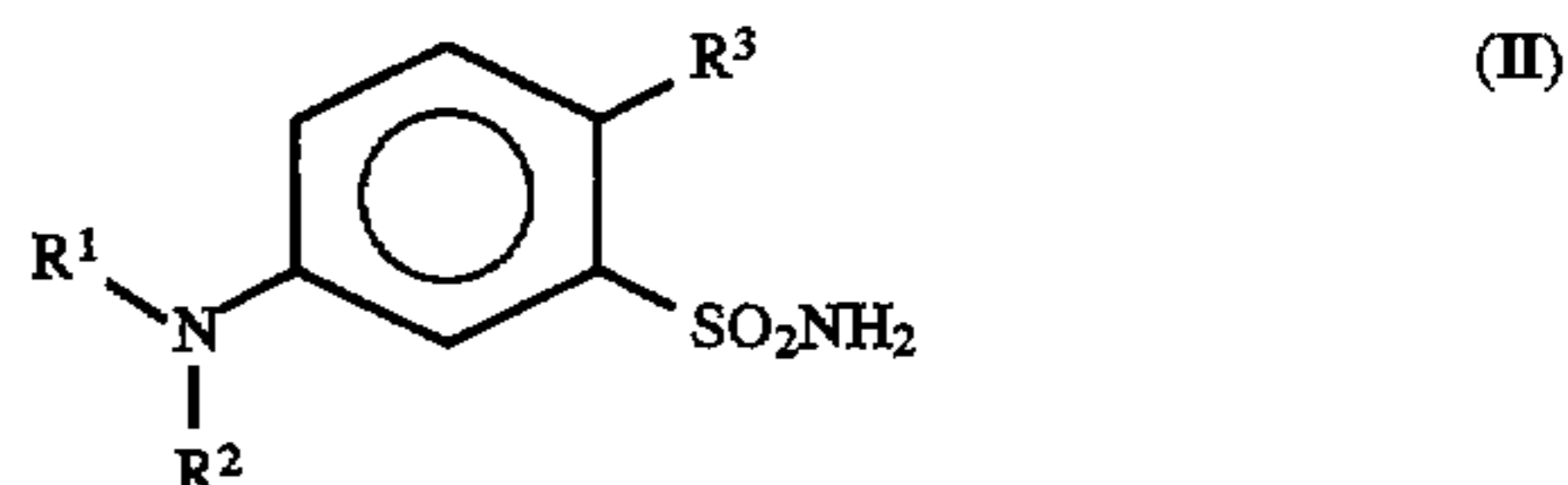
amino, preferably methyl, ethyl, methoxy, ethoxy, methylthio, ethylthio, chlorine, $NHCH_3$ or $N(CH_3)_2$, or
 Y is C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -haloalkyl or C_1 - C_4 -alkylthio, preferably methyl, ethyl, methoxy or ethoxy,
 or preferably those compounds of the formula (I) or salts thereof in which two or more of the particular or preferred definitions mentioned above for the radicals R^1 to R^{36} in formula (I) are present in combination.

Preferred compounds of the formula (I) or salts thereof are those in which

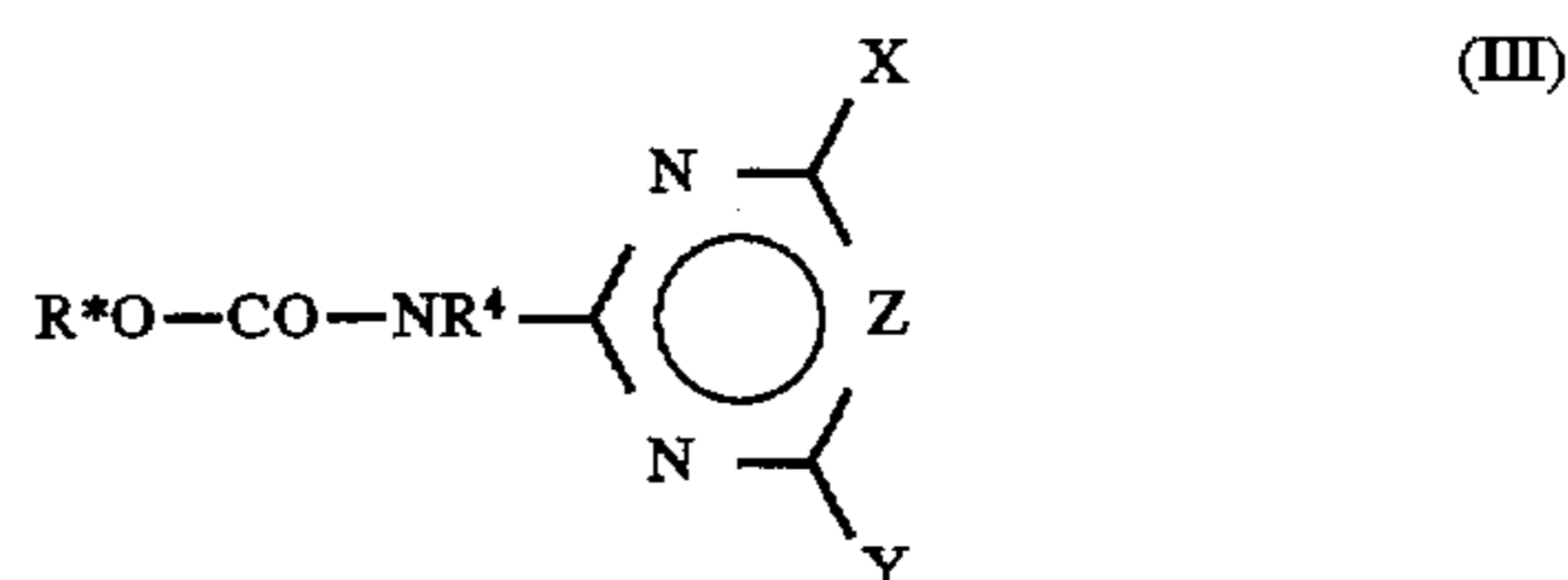
R^1 is methyl, ethyl, n-propyl, i-propyl or allyl,
 R^2 is $CO-R^5$, $COOR^6$, $CO-NR^8R^9$, $CS-NR^{10}R^{11}$, SO_2R^{14} or $SO_2NR^{15}R^{16}$,
 R^5 is H, C_1 - C_4 -alkyl, C_1 - C_2 -haloalkyl, cyclopropyl, phenyl, benzyl or heteroaryl having 5 or 6 ring atoms, the 3 latter radicals being unsubstituted or substituted by one or more halogen atoms,
 R^6 is C_1 - C_4 -alkyl, allyl, propargyl or cyclopropyl,
 R^8 is H, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl or $(C_1$ - C_4 -alkoxy)carbonyl,
 R^9 is H or C_1 - C_4 -alkyl,
 R^{10} is H or C_1 - C_4 -alkyl,
 R^{11} is H or C_1 - C_4 -alkyl,
 R^{14} is C_1 - C_4 -alkyl,
 R^{15} is H or C_1 - C_4 -alkyl and
 R^{16} is H or C_1 - C_4 -alkyl.
 R^5 is particularly preferably H, CH_3 , C_2H_5 , n- or i- C_3H_7 , n-, i-, t- or 2-butyl, n-pentyl, CF_3 , CH_2Cl , $CHCl_2$, CCl_3 , CH_2Br , CH_2CCl_3 , cyclopropyl, phenyl, thienyl, furyl or pyridyl, in which case the 4 latter radicals may be substituted by from 1 to 3 halogen atoms.

The present invention also relates to processes for the preparation of the compounds of the formula (I) according to the invention or salts thereof, which comprises

a) reacting a compound of the formula (II)

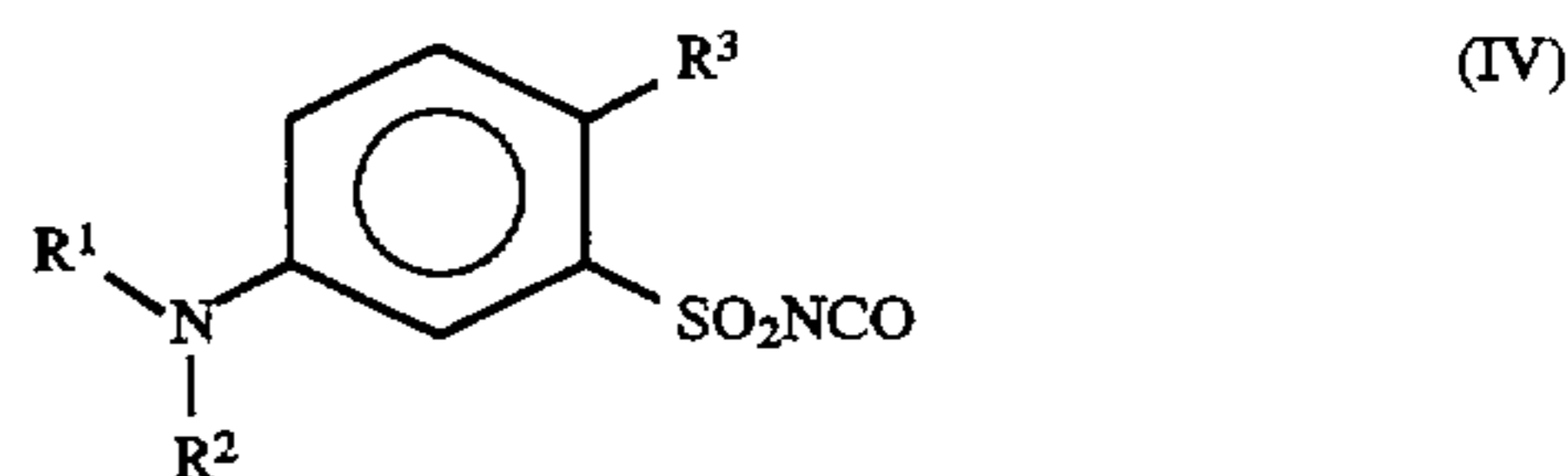


with a heterocyclic carbamate of the formula (III)



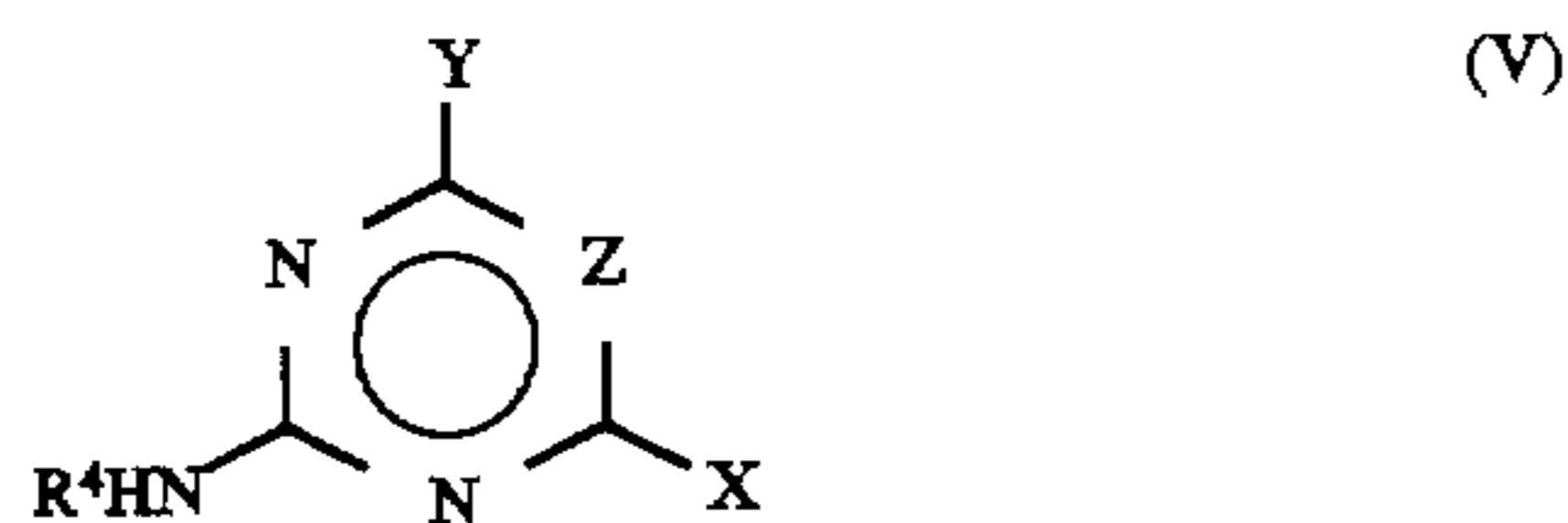
in which R^* is unsubstituted or substituted phenyl or C_1 - C_4 -alkyl, or

b) reacting a sulfonyl isocyanate of the formula (IV)



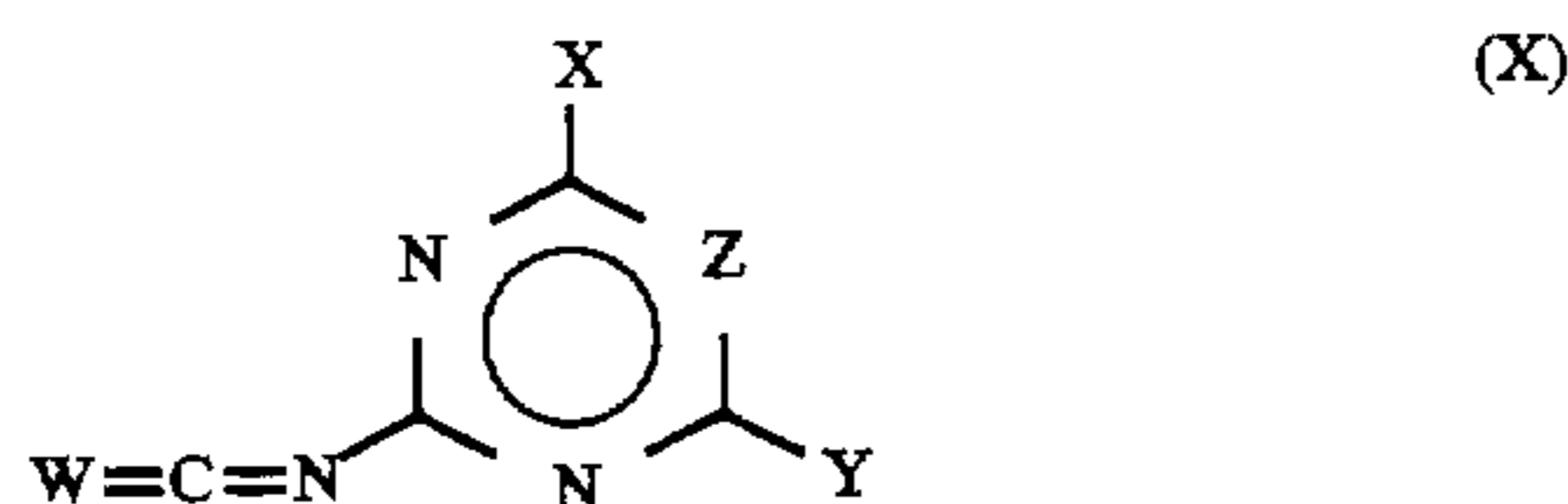
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with an amino heterocycle of the formula (V)



or

c) reacting a compound of the formula (II) with a (thio) isocyanate of the formula (X)

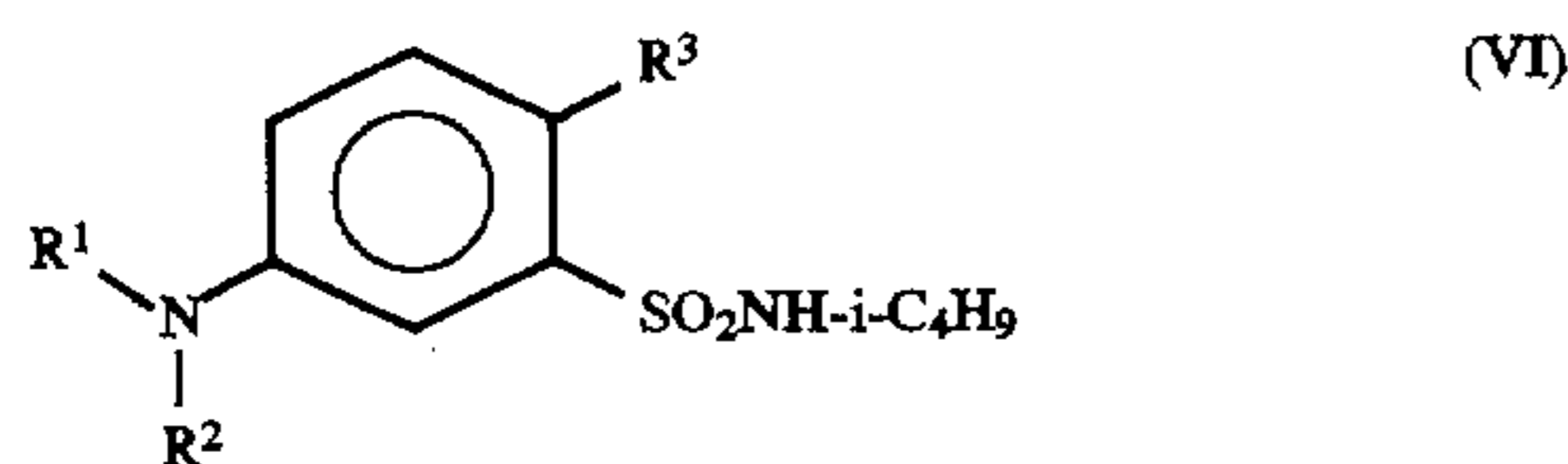


in the presence of a base, the radicals R^1 to R^4 , W, X, Y and Z in the above formulae (II) to (V) and (X) being as defined in formula (I) and, in the case of variants a) and b), the compounds initially obtained being those of the formula (I) in which $W=O$.

The reaction of the compounds of the formulae (II) and (III) is preferably carried out base-catalyzed in an inert organic solvent, for example dichloromethane, acetonitrile, dioxane or THF, at temperatures between 0°C ., preferably 20°C ., and the boiling point of the solvent. Examples of the base used are organic amine bases, such as 1,8-diazabicyclo [5.4.0]undec-7-ene (DBU), especially when $R^*=$ (substituted) phenyl (cf. EP-A-44 807), or trimethylaluminum or triethylaluminum, the latter especially when $R^*=\text{alkyl}$ (cf. EP-A-166 516).

The sulfonamides (II) and the sulfonyl isocyanates (IV) are new compounds. They and their preparation are also subjects of the invention.

The compounds of the formula (I) are obtained, for example, starting from compounds of the formula (VI)



in which R^1 , R^2 and R^3 are as defined in formula (I), by reaction with a strong acid (cf. in this respect WO 89/10921).

Examples of suitable strong acids are mineral acids, such as H_2SO_4 or HCl , or strong organic acids such as trifluoroacetic acid. The elimination of the tert-butyl protective group is carried out, for example, at temperatures from -20°C to the respective reflux temperature of the reaction mixture, preferably at 0°C to 40°C . The reaction can be carried out without solvent or else in an inert solvent, for example dichloromethane or trichloromethane.

The compounds of the formula (VI) are obtained, for example, from the compounds of the formula (VI')—which corresponds to the formula (VI) but in which $R^2=\text{H}$ — by reaction with suitable electrophiles such as acid chlorides, acid anhydrides, isocyanates, thioisocyanates, sulfonyl chlorides or amidosulfonyl chlorides (cf. in this respect: A. L. J. Beckniter in J. Zabicky, "The Chemistry of Amides", pp. 73-185, Interscience, New York, 1970; E. J. Corey et al., Tetrahedron Lett. 1978, 1051; H. J. Saunders, R. J. Slocombe, Chem. Rev. 43, 203 (1948); S. Ozaki, Chem. Rev. 72, 457, 469 (1972) G. Zölß, Arzneim.-Forsch. 33, 2 (1983); Houben-Weyl-Hagemann, "Methoden der organis-

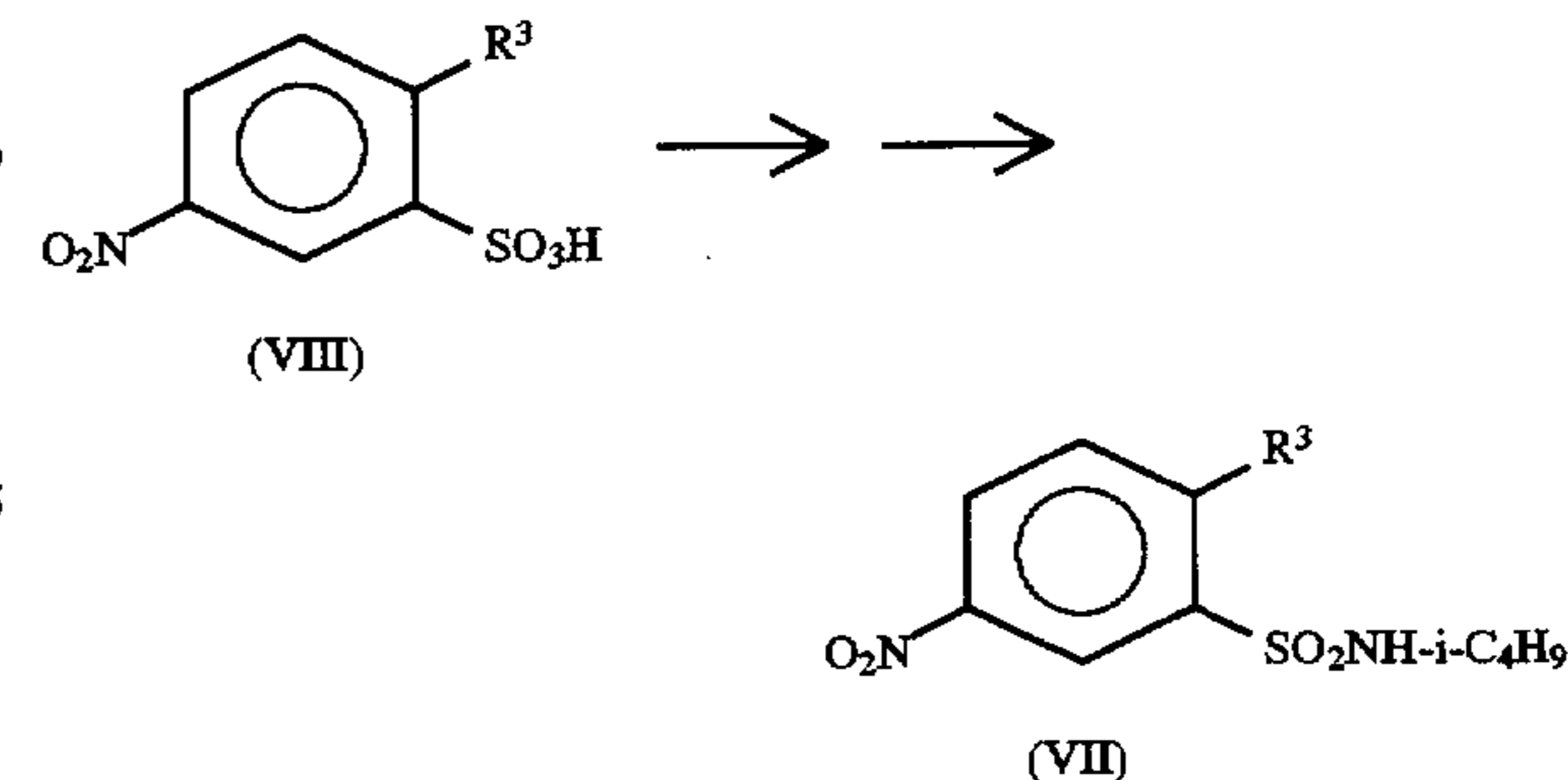
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chen Chemie [Methods of Organic Chemistry]", 4th edition, vol. E4, p. 485 ff., Thieme Verlag Stuttgart, 1983 J. Golinsky, M. Mahosza, Synthesis 1978, 823; Houben-Weyl-Müller, "Methoden der organischen Chemie", 4th edition, vol. IX, pp. 338-400 and 605-622, Thieme Verlag Stuttgart, 1955; Houben-Weyl-Klarmann, "Methoden der organischen Chemie", 4th edition, vol. E 11/2, pp. 1020-22, Thieme Verlag Stuttgart, 1985; S. Krishnamurthey, Tetrahedron Lett. 23, 3315 (1982)).

The N-monosubstituted aminobenzene derivatives, for example N-alkylaminobenzene derivatives, which are required for this purpose, of the formula (VI') (see formula (VI), $R^2=\text{H}$) are obtained by monoalkylation of the anilines of the formula (VI'') (=formula (VI), $R^1=\text{H}$ and $R^2=\text{H}$) by standard methods. For example, the N-acylation of the anilines of the formula (VI'') with carboxylic acid chlorides or carboxylic acid anhydrides gives the corresponding N-acyl-anilines. The subsequent reduction of the acylamino group to the analogous N-monosubstitutedamino group, e.g. alkylamino group (see above) using suitable reducing agents, for example borane/dimethyl sulfide complex, gives the aniline derivatives of the formula (VI') (=formula (VI), $R^2=\text{H}$) in very good yields; see S. Krishnamurthey, Tetrahedron Lett. 23, 3315 (1982).

The aniline derivatives mentioned of the formula (VI') (=formula (VI), R^1 and $R^2=\text{H}$) are obtained by methods known from the literature, by reduction of the nitro group in compounds (VII), for example by hydrogenation with hydrogen in the presence of a suitable catalyst, as Pd/C or Raney nickel, or by reduction with iron in a medium acidified with acetic acid. (cf. in this respect: H. Berrie, G. T. Neuhold, F. S. Spring, J. Chem. Soc. 1952, 2042; M. Freifelder, "Catalytic Hydrogenation in Organic Synthesis: Procedures and Commentary", J. Wiley and Sons, New York (1978) chapter 5).

The aromatic sulfonamides of the formula (VII) can be obtained from the sulfonic acids of the formula (VIII).



The sulfonic acid group in compounds (VIII) is first converted to the sulfonyl chlorides, for example by standard methods such as the reaction of phosphorus oxychloride or thionyl chloride with potassium salts of the corresponding sulfonic acids in inert solvents such as acetonitrile and/or sulfolane, or without solvent, by heating at reflux (cf. Houben-Weyl-Klarmann, "Methoden der organischen Chemie", 4th edition, vol. E XI/2, pp. 1067-1073, Thieme Verlag Stuttgart, 1985).

The formation of sulfonamide from the sulfonyl chlorides using tert-butylamine in ethanol gives the compounds (VII) in good yields (cf. analogous reactions in WO 89/10921).

The sulfonic acids of the formula (VIII) can be prepared from 2-methyl-5-nitrobenzenesulfonic acid, which is available commercially.

The substituent R^3 is introduced by oxidation of the methyl group of 2-methyl-5-nitrobenzenesulfonic acid using

standard methods, such as the reaction with potassium permanganate to give the carboxy group, followed if desired by derivatization, for example esterification or amidation (cf. in this respect: Houben-Weyl-Falbe: "Methoden der organischen Chemie", 4th edition, vol. E V/1, Thieme Verlag Stuttgart, 1985, pp. 199-202).

A wide variation in the radical R^3 can be obtained using a range of standard reactions:

Carboxylic acid amides are obtainable by reacting acid anhydrides or acid chlorides with amines (cf. in this respect: A. L. J. Beckwith in J. Zabicky, "The Chemistry of Amides", pp. 73-185, Interscience, New York 1970).

Thiocarboxylic acid S-esters can be prepared from carboxylic acids and thiols with carbonyl activation, for example using diphenylphosphinyl chloride (cf. in this respect: D. Scholz, D. Eigner, Monatsh. Chemie 110, 759 (1979), S. Yamada et al., J. Org. Chem. 39, 3302 (1974)).

Thiocarboxylic acid O-esters can be prepared by reacting carboxylic acid esters with suitable reagents, for example P_4S_{10} (cf. in this respect: S. O. Lauresson et al., Bull. Soc. Chim. Belg. 87, 293 (1978); T. Nishiwak et al., Chem. Lett. 1980, 401).

Thiocarboxylic acid amides are obtained from carboxylic acid amides by "sulfurization", for example with phosphorus pentasulfide (Houben-Weyl-Falbe, "Methoden der organischen Chemie", 4th edition, vol. E 5/2, pp. 1242-1247 (and literature cited therein), Thieme Verlag Stuttgart, 1985).

Aldehydes can be synthesized from carboxylic acids or esters using a range of reducing agents (Houben-Weyl-Falbe, "Methoden der organischen Chemie", 4th edition, vol. E 3, p. 418 ff., Thieme Verlag Stuttgart, 1983).

Functionalized aldehyde derivatives, for example oximes, oxime ethers, hydrazones etc., can be obtained from the aldehydes by condensation with the corresponding amines (cf. in this respect: Houben-Weyl-Müller, "Methoden der organischen Chemie", 4th edition, vol. 7/1, pp. 453-474, Thieme Verlag Stuttgart, 1954).

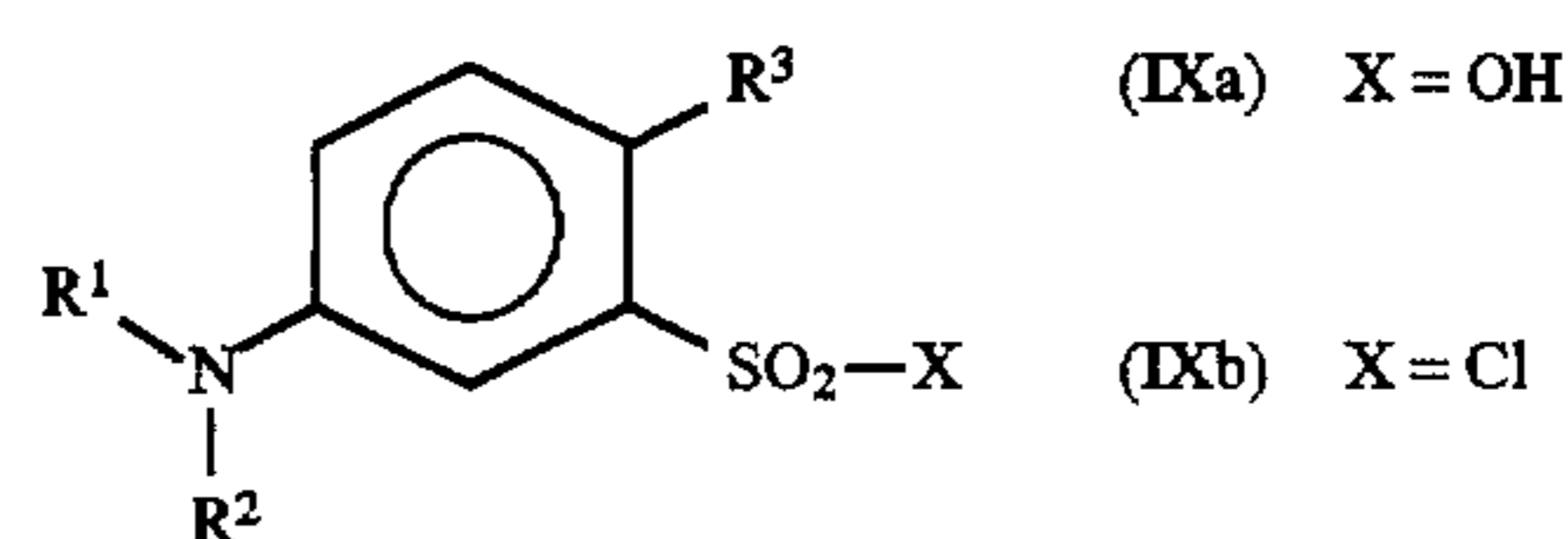
N-Alkoxy-carboxylic acid imide esters can be prepared from hydroxamic acid bromide derivatives and alcohols (E. C. Tayler, F. Kienzle, J. Org. Chem. 36, 233 (1971)).

Carboxylic acid imide esters can be obtained from carboxylic acid chloride imides and corresponding alcohols (cf. in this respect: H. Böhme, O. Müller, Chem. Ber. 98, 1450 (1965); G. Bock, Chem. Ber. 100, 2870 (1967)).

O-Acyl oximes can be prepared, for example, by reacting carboxylic acid anhydrides with ketoximes (cf. in this respect: S. Bittner, Y. Knobler, M. Frankel, Tetrahedron Lett. 1965, 95).

Hydroxamic acid amides can be obtained by reacting hydroxamic acid chloride derivatives with amines (cf. in this respect: Houben-Weyl-Müller, "Methoden der organischen Chemie", 4th edition, vol. 10/4, p. 209 ff., Thieme Verlag Stuttgart, 1968).

Alternatively, the sulfonamides of the formula (II) in which R^1 and R^2 are not H can be obtained by aminolysis of the corresponding sulfonyl chlorides of the formula (IXb)



which in turn are readily obtainable from the sulfonic acids (IXa) by the standard methods mentioned (see abovementioned reactions of (VIII) to (VII)).

The compounds (IXa) can in turn be obtained from the nitrobenzenesulfonic acid (VIII) by the sequence of reactions

- (1) reduction by analogy with reduction of (VII),
- (2) N-alkylation and
- (3) N-acylation,

the latter being as described in the preparation of (VI).

The carbamates of the formula (III) which are required for the reaction of compounds (II) by variant a) are known from the literature or can be prepared by analogy with known processes (cf. EP-A-70 804 or U.S. Pat. No. 4,480,101).

The compounds of the formulae (IV) and (V) which can be employed for the process variants b) can also be prepared from the abovementioned compounds of the formulae (III) and (VIII) and their precursors by, or by analogy with, methods which are known in general terms.

The phenylsulfonyl isocyanates of the formula (IV) can be prepared, for example, by analog with the processes from EP-A-184 385 starting from compounds of the formula (II) and using, for example, phosgene.

The reaction of the compounds (IV) with the amino heterocycles of the formula (V) is preferably carried out in inert aprotic solvents, for example dioxane, acetonitrile or tetrahydrofuran, at temperatures between 0° C. and the boiling temperature of the solvent.

The (thio)isocyanates of the formula (X) can be prepared by methods known from the literature (cf. EP-A-232 067, EP-A-166 516).

The reaction of compounds of the formula (X) with sulfonamides of the formula (II) is carried out at temperatures of between -10° C. and +10° C., preferably between +20° and +80° C., in an inert aprotic solvent, for example acetone or acetonitrile, in the presence of a suitable base such as triethylamine or potassium carbonate.

The salts of the compounds of the formula (I) are preferably prepared in inert solvents such as water, methanol, acetone, dichloromethane, tetrahydrofuran, toluene or heptane, at temperatures from 0° to 100° C. Examples of bases suitable for the preparation of the salts according to the invention are alkali metal carbonates, such as potassium carbonate, alkali metal and alkaline earth metal hydroxides, ammonia or a suitable amine base, such as triethylamine or ethanolamine. Examples of acids suitable for salt formation are HCl, HBr, H_2SO_4 or HNO_3 .

The inert solvents referred to in the abovementioned process variants are in each case solvents which are inert under the respective reaction conditions, but which are not necessarily inert under any reaction conditions.

The compounds of the formula (I) according to the invention or their salts have an excellent herbicidal activity against a broad range of economically important monocotyledon and dicotyledon harmful plants. The active substances also act efficiently on perennial weeds which produce shoots from rhizomes, root stocks or other perennial organs and which are difficult to control. In this context, it does not matter whether the substances are applied before sowing,

pre-emergence or post-emergence. Specifically, examples may be mentioned of some representatives of the monocotyledon and dicotyledon weed flora which can be controlled by the compounds according to the invention, without the mention intending restriction to certain species.

Examples of weed species on which the active substance acts efficiently are, from amongst the monocotyledons, *Avena*, *Lolium*, *Alopecurus*, *Phalaris*, *Echinochloa*, *Digitaria*, *Setaria* and also *Cyperus* species from the annual sector and from amongst the perennial species *Agropyron*, *Cymodon*, *Imperata* and *Sorghum*, and also perennial *Cyperus* species.

In the case of the dicotyledon weed species, the range of action extends to species such as, for example, *Galium*, *Viola*, *Veronica*, *Lamium*, *Stellaria*, *Amaranthus*, *Sinapis*, *Ipomoea*, *Matricaria*, *Abutilon* and *Sida* from amongst the annuals, and *Convolvulus*, *Cirsium*, *Rumex* and *Artemisia* in the case of the perennial weeds.

The active substances according to the invention likewise effect outstanding control of weeds which occur under the specific conditions of rice-growing, such as, for example, *Sagittaria*, *Alisma*, *Eleocharis*, *Scirpus* and *Cyperus*.

If the compounds according to the invention are applied to the soil surface before germination, then the weed seedlings are either prevented completely from emerging, or the weeds grow until they have reached the cotyledon stage but then their growth stops and, eventually, after three to four weeks have elapsed, they die completely.

If the active substances are applied post-emergence on the green parts of the plants, growth likewise stops drastically a very short time after the treatment and the weed plants remain at the growth stage of the point in time of application, or they die completely after a certain time, so that in this manner competition by the weeds, which is harmful to the crop plants, is eliminated at a very early point in time and in a sustained manner.

Even though the compounds according to the invention have an excellent herbicidal activity against monocotyledon and dicotyledon weeds, crop plants of economically important crops, such as, for example, wheat, barley, rye, rice, maize, sugar beet, cotton and soya, are damaged not at all, or only to a negligible extent. For these reasons, the present compounds are highly suitable for selectively controlling unwanted plant growth in agricultural crop plants.

In addition, the substances according to the invention exhibit outstanding growth-regulatory properties in crop plants. They intervene to regulate the plant metabolism and can therefore be employed so as to have a specific influence on substances contained in plants, and for facilitating harvesting, for example by initiating desiccation and growth compression. Furthermore, they are also suitable for the general control and inhibition of unwanted vegetative growth, without killing off the plants in the process. Inhibition of vegetative growth plays an important role in many monocotyledon and dicotyledon crops, since it can reduce or completely prevent lodging.

The compounds according to the invention can be used in the form of wettable powders, emulsifiable concentrates, sprayable solutions, dusting agents or granules in the conventional formulations. The invention therefore also relates to herbicidal and plant growth-regulating agents comprising compounds of the formula (I) or salts thereof.

The compounds of the formula (I) or salts thereof can be formulated in a variety of ways, as predetermined by the biological and/or chemico-physical parameters. The following possibilities are therefore suitable for formulation: wettable powders (WP), water-soluble powders (SP), water-

soluble concentrates, emulsifiable concentrates (EC), emulsions (EW) such as oil-in-water and water-in-oil emulsions, sprayable solutions, suspension concentrates (SC), dispersions on an oil or water base, oil-miscible solutions, capsule suspensions (CS), dusting agents (DP) seed-dressing agents, granules for scattering and soil application, granules (GR) in the form of microgranules, sprayable granules, coated granules and adsorption granules, water-dispersible granules (WG), water-soluble granules (SG), ULV formulations, microcapsules and waxes.

These individual formulation types are known in principle and are described, for example in: Winnacker-Küchler, "Chemische Technologie [Chemical Technology]", Volume 7, C. Hauser Verlag Munich, 4th Ed., 1986; Wade van Valkenburg, "Pesticide Formulations", Marcel Dekker New York, 1973; K. Martens, "Spray Drying" Handbook, 3rd Ed. 1979, G. Goodwin Ltd. London.

The formulation auxiliaries required, such as inert materials, surfactants, solvents and other additives, are likewise known and are described, for example, in: Watkins, "Handbook of Insecticide Dust Diluent and Carriers", 2nd Ed., Darland Books, Caldwell N.J.; H.v. Ophen, "Introduction to Clay Colloid Chemistry", 2nd Ed., J. Wiley & Sons, New York; C. Marsden, "Solvents Guide", 2nd Ed., Interscience, New York 1963; McCutcheon's "Detergents and Emulsifiers Annual", MC Publ. Corp. Ridgewood N.J.; Sisley and Wood, "Encyclopedia of Surface Active Agents", Chem. Publ. Co. Inc., New York 1964; Schönfeldt, "Grenzflächenaktive Äthylenoxidaddukte" [Surface-active Ethylene Oxide Adducts] Wiss. Verlagsgesell., Stuttgart 1976; Winnacker-Küchler, "Chemische Technologie [Chemical Technology]", Volume 7, C. Hauser Verlag Munich, 4th Ed. 1986.

Combinations with other pesticidally active substances, such as insecticides, acaricides, herbicides, fungicides, safeners, fertilizers and/or growth regulators may also be prepared on the basis of these formulations, for example in the form of a ready-to-use formulation or as a tank mix.

Wettable powders are preparations which are uniformly dispersible in water and which, besides the active substance, also contain surfactants of ionic and/or nonionic type (wetting agents, dispersants), for example polyethoxylated alkylphenols, polyethoxylated fatty alcohols, polyethoxylated fatty amines, fatty alcohol polyglycol ether sulfates, alkanesulfonates, alkylbenzenesulfonates, sodium ligninsulfonate, sodium 2,2'-dinaphthylmethane-6,6'-disulfonate, sodium dibutyl-naphthalenesulfonate, or alternatively sodium oleoylmethyltaurinate, in addition to a diluent or inert substance. The wettable powders are prepared by finely grinding the herbicidal active substances, for example, in conventional apparatus such as hammer mills, blower mills and air-jet mills, and mixing them simultaneously or subsequently with the formulation auxiliaries.

Emulsifiable concentrates are prepared by dissolving the active substance in an organic solvent, for example butanol, cyclohexanone, dimethylformamide, xylene and also higher-boiling aromatic compounds or hydrocarbons or mixtures of the organic solvents, with the addition of one or more surfactants of ionic and/or nonionic type (emulsifiers). Examples of emulsifiers which can be used are: calcium salts of an alkylarylsulfonic acid such as Ca dodecylbenzenesulfonate, or nonionic emulsifiers, such as fatty acid polyglycol esters, alkylaryl polyglycol ethers, fatty alcohol polyglycol ethers, propylene oxide/ethylene oxide condensation products, alkyl polyethers, sorbitan esters, such as sorbitan fatty acid esters or polyoxyethylene sorbitan esters, such as polyoxyethylene sorbitan fatty esters.

Dusting agents are obtained by grinding the active substance with finely divided solid substances, for example talc or natural clays, such as kaolin, bentonite, pyrophyllite or diatomaceous earth.

Suspension concentrates may be based on water or oil. They can be prepared by, for example, wet grinding using conventional bead mills with the possible addition of surfactants as already mentioned, for example, above for the other types of formulation.

Emulsions, for example oil-in-water emulsions (EW), can be prepared, for example, by means of stirrers, colloid mills and/or static mixers, using aqueous organic solvents and, if desired, surfactants, for example as already listed above for the other types of formulation.

Granules can be produced either by spraying the active substance onto adsorptive, granulated inert material or by applying active substance concentrates onto the surface of carriers, such as sand, kaolinites or granulated inert material, by means of binders, for example polyvinyl alcohol, sodium polyacrylate or, alternatively, mineral oils. Suitable active substances can also be granulated in the manner which is conventional for the production of fertilizer granules, if desired in a mixture with fertilizers.

Water-dispersible granules are generally prepared by conventional methods such as spray-drying, fluidized-bed granulation, plate granulation, mixing using high-speed mixers and extrusion without solid inert material.

The agrochemical formulations generally contain from 0.1 to 99% by weight and in particular from 0.1 to 95% by weight of active substance of the formula (I) or salts thereof.

The concentration of active substance in wettable powders is, for example, about 10 to 90% by weight; the remainder to 100% by weight is composed of conventional formulation components. In the case of emulsifiable concentrates, the concentration of active substance can be about 1 to 90, preferably 5 to 80% by weight. Formulations in the form of dusts usually contain 1 to 30, preferably 5 to 20% by weight of active substance, sprayable solutions about 0.05 to 80, preferably 2 to 50% by weight. In the case of water-dispersible granules, the active substance content depends partly on whether the active compound is liquid or solid and on which granulation auxiliaries, fillers etc. are used. In the case of the water-dispersible granules, the content of active substance is, for example, between 1 and 95% by weight and preferably between 10 and 80% by weight.

In addition, the active substance formulations mentioned contain, if appropriate, the adhesives, wetting agents, dispersants, emulsifiers, penetrants, preservatives, frost protectors and solvents, fillers, carriers and colorants, antifoams, evaporation inhibitors and agents influencing the pH and the viscosity which are conventional in each case.

Combination partners which can be employed for the active substances according to the invention in mixed formulations or as a tank mix are, for example, known active substances as described in, for example, Weed Research 26, 441-445 (1986), or "The Pesticide Manual", 9th edition, The British Crop Protection Council, 1990/91, Bracknell, England, and the literature quoted therein. Examples of herbicides known from the literature which can be combined with the compounds of the formula (I) are the following active substances (note: the compounds are either given by their common name in accordance with the International Organization for Standardization (ISO) or by the chemical name, together if appropriate with a common code number):

acetochlor; acifluorfen; aclonifen; AKH 7088, i.e. [[1-[5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-

nitrophenyl]-2-methoxyethylidene]amino]oxy]acetic acid and its methyl ester; alachlor; alloxydim; ametryn; amidosulfuron; amitrol; AMS, i.e. ammonium sulfamate; anilofos; asulam; atrazin; aziprotryn; barban; BAS 516 H, i.e. 5-fluoro-2-phenyl-4H-3,1-benzoxazin-4-one; benazolin; benfluralin; benfuresate; bensulfuron-methyl; bensulide; bentazone; benzofenap; benzofluor; benzoylprop-ethyl; benzthiazuron; bialaphos; bifenox; bromacil; bromobutide; bromofenoxim; bromoxynil; bromuron; buminafos; busoxinone; butachlor; butamifos; butenachlor; buthidazole; butralin; butylate; carbetamide; CDAA, i.e. 2-chloro-N,N-di-2-propenylacetemide; CDEC, i.e. 2-chloroallyl diethyldithiocarbamate; CGA 184927, i.e. 2-[4-[(5-chloro-3-fluoro-2-pyridinyl)oxy]phenoxy]propanoic acid and its 2-propynyl ester; chlomethoxyfen; chloramben; chlorazifop-butyl; pirifenop-butyl; chlorbromuron; chlorbufam; chlorfenac; chlorflorecol-methyl; chloridazon; chlorimuron ethyl; chlornitrofen; chlorotoluron; chloroxuron; chlorpropham; chlorsulfuron; chlorthalidimethyl; chlorthiamid; cinmethylin; cinosulfuron; clethodim; clomazone; clomeprop; cloproxydim; clopyralid; cyanazine; cycloate; cycloxydim; cycluron; cyperquat; cyprazine; cyprazole; 2,4-DB; dalapon; desmediphan; desmetryn; di-allate; dicamba; dichlobenil; dichlorprop; diclofop-methyl; diethatyl; difenoxuron; difenzoquat; diflufenican; dimefuron; dimethachlor; dimethametryn; dimethazone; clomazon; dimethipin; dimetrasulfuron, cinosulfuron; dinitramine; dinoseb; dinoterb; diphenamid; dipropetryn; diquat; dithiopyr; diuron; DNOC; eglazine-ethyl; EL 177, i.e. 5-cyano-1-(1,1-dimethylethyl)-N-methyl-3H-pyrazole-4-carboxamide; endothal; EPTC; esprocarb; ethafluralin; ethametsulfuron-methyl; ethidimuron; ethiozin; ethofumesate; F5231, i.e. N-[2-chloro-4-fluoro-5-[4-(3-fluoropropyl)-4,5-dihydro-5-oxo-1H-tetrazol-1-yl]phenyl]ethanesulfonamide; F6285, i.e. 1-[5-(N-methylsulfonyl)amino-2,4-dichlorophenyl]-3-methyl-4-difluoromethyl-1,2,4-triazol-5-one; fenoprop; fenoxan, s. clomazon; fenoxaprop-ethyl; fenuron; flamprop-methyl; flazasulfuron; fluazifop and its ester derivatives; fluchloralin; flumetsulam; N-[2,6-difluorophenyl]-5-methyl-1,2,4-triazolo[1,5a]pyrimidin-2-sulfonamide; flumeturon; flumipropyn; fluorodifen; fluoroglycofen-ethyl; fluridone; furochloridone; furoxypyr; flurtamone; fomesafen; fosamine; furyloxyfen; glufosinate; glyphosate; halosaten; haloxyfop and its ester derivatives; hexazinone; Hw 52, i.e. N-(2,3-dichlorophenyl)-4-(ethoxymethoxy)benzamide; imazamethabenzmethyl; imazapyr; imazaquin; imazethamethapyr; imazethapyr; imazosulfuron; ioxynil; isocarbamid; isopropalin; isoproturon; isou-ron; isoxaben; isoxapyrifop; karbutilate; lactofen; lena-til; linuron; MCPA; MCPB; mecoprop; mefenacet; mefluidid; metamitron; metazachlor; methabenzthiazu-ron; metham; methazole; methoxyphenone; methenyl-dymron; metobromuron; metolachlor; metoxuron; metribuzin; metsulfuron-methyl; MH; molinate; mon- alide; monocarbamide dihydrogensulfate; monolinu-ron; monuron; MT 128, i.e. 6-chloro-N-(3-chloro-2-propenyl)-5-methyl-N-phenyl-3-pyridazinamine; MT 5950, i.e. N-[3-chloro-4-(1-methylethyl)phenyl]-2-methylpentanamide; naproanilide; napropamide; nap- talam; NC 310, i.e. 4-(2,4-dichlorobenzoyl)-1-methyl-5-benzloxypyrazole; neburon; nicosulfuron; nipyraclphen; nitralin; nitrofen; nitrofluorfen; norflu-

razon; orbencarb; oryzalin; oxadiazon; oxyfluorfen; paraquat; pebulate; pendimethalin; perfluidone; phenisopham; phenmedipham; picloram; piperophos; piributicarb; pirifenop-butyl; pretilachlor; primisulfuron-methyl; procyazine; prodiamine; profluralin; 5 proglazine-ethyl; prometon; prometryn; propachlor; propanil; propaquizafop and its ester derivatives; propazine; propham; propyzamide; prosulfalin; prosulfocarb; prynachlor; pyrazolate; pyrazon; 10 pyrazosulfuron-ethyl; pyrazoxyfen; pyridate; quinclo rac; quinmerac; quinofop and its ester derivatives, quizalofop and its ester derivatives; quizalofop-ethyl; quizalofop-p-tefuryl; renniduron; dymron; S 275, i.e. 2-[4-chloro-2-fluoro-5-(2-propynyloxy)phenyl]-4,5,6, 7-tetrahydro-2H-indazole; S 482, i.e. 2-[7-fluoro-3,4- 15 dihydro-3-oxo-4-(2-propynyl)-2H-1,4-benzoxazin-6-yl]-4,5,6,7-tetrahydro-1H-isoindole-1,3(2H)-dione; secbumeton; sethoxydim; siduron; simazine; simetryn; SN 106279, i.e. 2-[[7-[2-chloro-4-(trifluoromethyl) phenoxy]-2-naphthyl]oxy]propanoic acid and its 20 methyl ester; sulfometuron-methyl; sulfazuron; flaza-sulfuron; TCA; tebutam; tebuthiuron; terbacil; terbutcarb; terbuchlor; terbumeton; terbuthylazine; terbutryn; TFH 450, i.e. N,N-diethyl-3-[(2-ethyl-6-methylphenyl) sulfonyl]-1H-1,2,4-triazole-1-carboxamide; thiazafluor- 25 ron; thifensulfuron-methyl; thiobencarb; tiocarbazil; tralkoxydim; tri-allate; triasulfuron; triazofenamide; tribenuron-methyl; triclopyr; tridiphane; trietazine; trifluralin; trimeturon; vernolate; WL 110547, i.e. 5-phenoxy-1-[3-(trifluoromethyl)phenyl]-1H-tetrazole. 30

For use, the formulations, present in commercially available form, are diluted, if appropriate, in a customary manner, for example using water in the case of wettable powders, emulsifiable concentrates, dispersions and water-dispersible granules and then applied to plants, plant parts or agricultural- 35 or industrially utilized soil, on which the plants are located, or in which they grow or are present as seed. Preparations in the form of dusts or granules for soil application and scattering, and also sprayable solutions, are usually not further diluted with other inert substances before 40 use.

The application rate required for the compounds of the formula I varies with the external conditions, such as, inter alia, temperature, humidity, and the nature of the herbicide 45 used. It can vary within wide limits, for example between 0.001 and 10.0 kg/ha or more of active substance; preferably, however, it is between 0.005 and 5 kg/ha.

A) CHEMICAL EXAMPLES

a) 2-Carboxy-nitrobenzenesulfonic acid

400.0 g (2.53 mol) of potassium permanganate are added in portions at 80° C. over a period of 2 h to a solution of 106.0 g (0.40 mol) of 2-methyl-5-nitrobenzenesulfonic acid and 80.0 g (0.58 mol) of potassium carbonate in 1300 ml of water. The reaction temperature is maintained at between 50 80° and 95° C.

After stirring for a further 4 h, the solid formed is filtered off. The filtrate is acidified with concentrated hydrochloric acid (pH=1). The colorless 2-carboxy-5- 60 nitrobenzenesulfonic acid which has precipitated is filtered off with suction through a Büchner funnel and dried at about 50° C./100 torr (82.0 g; 83.7% of theory). Melting point: >300° C.

b) 2-Methoxycarboxy-5-nitrobenzenesulfonic acid

A suspension of 190.0 g (0.77 mol) of 2-carboxy-5-nitrobenzenesulfonic acid, 10 ml of DMF and 250 ml (3.43

mol) of thionyl chloride is heated at boiling for 3 h. After separating off the insoluble constituents by filtration, the filtrate is concentrated. 200 ml (4.94 mol) of methanol are added to the residue which results. When addition is complete the reaction mixture is cooled to 0° C. The solid which precipitates is filtered off and dried. 70.9 g (35.3% of theory) of colorless, crystalline 2-methoxycarbonyl-5-nitrobenzenesulfonic acid (m.p.: 92°-94° C.) are thus obtained. By distilling off the volatile components from the mother liquor, a second fraction (62.5 g, 31.1% of theory) is obtained.

c) 2-Methoxycarbonyl-5-nitrobenzenesulfonyl chloride

A solution of 17.3 g (0.27 mol) of potassium hydroxide (88% strength) and 100 ml of methanol is added carefully with vigorous stirring to a solution of 70.9 g (0.27 mol) of 2-methoxycarbonyl-5-nitrobenzenesulfonic acid in 300 ml of methanol. The mixture is cooled to 0° C. and the salt which is precipitated is filtered off, dried and then suspended in 150 ml of sulfolane, 150 ml of acetonitrile and 10 ml of dimethylformamide. After the dropwise addition of 100 ml (1.07 mol) of phosphorus oxychloride, the mixture is heated at boiling for 2.5 h. The reaction mixture is then poured into ice-water. The 2-methoxycarbonyl-5-nitrobenzenesulfonyl chloride (60.1 g, 70% of theory) which has precipitated is filtered off with suction through a Büchner funnel and freed from traces of solvent under reduced pressure. Melting point: 86°-88° C.

d) N-tert-Butyl-2-methoxycarbonyl-5-nitrobenzenesulfonamide

50 ml (0.48 mol) of tert-butylamine are slowly added dropwise at 0° C. to a solution of 34.4 g (0.12 mol) of 2-methoxycarbonyl-5-nitrobenzenesulfonyl chloride in 200 ml of ethyl acetate and 250 ml of ethanol. The reaction solution is then stirred for a further 10 min at room temperature. After the addition of 500 ml of water, a colorless solid crystallizes out. It is filtered off and dried to give 28.1 g (89% of theory) of N-tert-butyl-2-methoxycarbonyl-5-nitrobenzenesulfonyl chloride. m.p.: 121°-124° C.

e) N-tert-Butyl-5-amino-2-methoxycarbonylbenzenesulfonamide

25.08 g (0.079 mol) of N-tert-butyl-2-methoxycarbonyl-5-nitrobenzenesulfonamide are dissolved in 1000 ml of MeOH. 0.50 g of Pd—C (10%) is added and the mixture is shaken under a hydrogen atmosphere (1 atm) until the uptake of hydrogen has finished. The catalyst is separated off and the solvent is removed by distillation. The residue is induced to crystallize by stirring with a little ethyl acetate. The resulting N-tert-butyl-5-amino-2-methoxycarbonylbenzenesulfonamide (18.3 g; 80.9% of theory) melts at 193° C.

f) N-tert-Butyl-5-formylamino-2-methoxycarbonylbenzenesulfonamide

60 6.5 ml of formic acid are carefully added at 0° C. to 13 ml of acetic anhydride. The mixture is subsequently heated at 50°-60° C. for 2 h. A solution of 16.0 g (0.056 mol) of N-tert-butyl-5-amino-2-methoxycarbonylbenzenesulfonamide in 50 ml of DMF is then added dropwise at 0° C. The cooling bath is removed and the mixture is stirred for a further 4 h at room temperature. The reaction mixture is then shaken up in 800 ml of 65

ethyl acetate and washed with three times 150 ml of water. The organic phase is dried over magnesium sulfate, the solvent is distilled off, and the residue is recrystallized from ethyl acetate/n-heptane. The product is N-tert-butyl-5-formylamino-2-methoxycarbonylbenzenesulfonamide (14.23 g, 82% of theory) which melts at 113°–114° C.

g) N-tert-Butyl-2-methoxycarbonyl-5-methylaminobenzenesulfonamide

9.92 g (0.032 mol) of N-tert-butyl-5-formylamino-2-methoxycarbonylbenzenesulfonamide are dissolved in 50 ml of CHCl₃, and then 5 ml (0.053 mol) of boranedimethyl sulfide complex are added at 0° C. After 1 h at 0° C. and 3 h at room temperature the reaction mixture is cooled to 0° C. 30 ml of methanol are added and the mixture is washed with water. The organic phase is dried over magnesium sulfate, the solvent is removed by distillation, and 9.23 g (98% of theory) of N-tert-butyl-2-methoxycarbonyl-5-methylaminobenzenesulfonamide are obtained. m.p.: 120°–124° C.

h) N-tert-Butyl-5-[N-(ethoxycarbonylaminothiocarbonyl)methylamino]-2-methoxycarbonylbenzenesulfonamide

1.20 g (4.0 mmol) of N-tert-butyl-2-methoxycarbonyl-5-methylaminobenzenesulfonamide is dissolved in 5 ml of anhydrous DMF, and 0.60 g (4.3 mmol) of 95% strength ethoxycarbonyl isothiocyanate is added. After 3 h at room temperature the mixture is taken up in ethyl acetate and washed with 1N hydrochloric acid and water. The organic phase is dried over magnesium sulfate and the solvent is removed by distillation. The residue is taken up in a little ethyl acetate and precipitated with heptane at –25° C. The precipitate is filtered off with suction and dried to give 1.29 g (75% of theory) of colorless N-tert-butyl-5-[N-(ethoxycarbonylaminothiocarbonyl)methylamino]-2-methoxycarbonylbenzenesulfonamide. m.p.: 110° C.

i) 5-[N-(Ethoxycarbonylaminothiocarbonyl)methylamino]-2-methoxycarbonylbenzenesulfonamide

1.05 g (2.4 mmol) of N-tert-butyl-5-[N-(ethoxycarbonylaminothiocarbonyl)methylamino]-2-methoxycarbonylbenzenesulfonamide is stirred for 18 h in 15 ml of trifluoroacetic acid at room temperature. Volatile components are then removed by distillation at 12 torr/50° C. The residue is suspended in toluene. The suspension is again concentrated at 12 torr/50° C. to give a highly viscous residue (0.85 g, 93% of theory) which is reacted directly without further purification to give the corresponding sulfonylurea (cf. Example j).

j) N-[(4,6-Dimethoxy-2-pyrimidin-2-yl)aminocarbonyl]-5-[N-(ethoxycarbonylaminothiocarbonyl)methylamino]-2-methoxycarbonylbenzenesulfonamide (see tabular Example 2192)

1.2 ml of DBU is added to a suspension of 0.69 g (1.84 mmol) of 5-[N-(ethoxycarbonylaminothiocarbonyl)methylamino]-2-methoxycarbonylbenzenesulfonamide and 0.55 g (1.99 mmol) of 4,6-dimethoxy-2-phenoxycarbonylamino-2-pyrimidine in 5 ml of acetonitrile. The mixture is stirred for 17 h at room temperature and the solvent is then removed by distillation. The residue is taken up in water and washed with diethyl ether. The aqueous

phase is acidified with concentrated hydrochloric acid (pH=1) and produces a colorless precipitate, which is filtered off and induced to crystallize by stirring with a little methanol. The resulting product is 0.61 g (60% of theory) of N-[(4,6-dimethoxy-2-pyrimidin-2-yl)aminocarbonyl]-5-[N-(ethoxycarbonylaminothiocarbonyl)methylamino]-2-methoxycarbonylbenzenesulfonamide. m.p.: 144°–145° C.

k) 5-[N-(Acetylmethylamino)-N-(4,6-dimethoxy-2-pyrimidin-2-yl)aminocarbonyl]-2-methoxycarbonylbenzenesulfonamide (see Table 1, Example 89)

0.45 ml of DBU is added to a mixture of 0.75 g (2.6 mmol) of 5-(N-acetylmethylamino)-2-methoxycarbonylbenzenesulfonamide and 0.73 g (2.6 mmol) of 4,6-dimethoxy-2-(phenoxycarbonylamino)pyrimidine in 10 ml of CH₃CN. The mixture is worked up in analogy to Example j) to give 0.59 g of the desired sulfonylurea, m.p.: 197° C.

l) 2-Methoxycarbonyl-5-(N-methoxycarbonyl-N-methylamino)benzenesulfonyl isocyanate

5.0 g of 2-methoxycarbonyl-5-(N-methoxycarbonyl-N-methylamino)benzenesulfonamide are suspended in 17 ml of 1,2-dichloroethane. 4 ml of thionyl chloride are added and the reaction mixture is heated at boiling for 5 h.

The reaction mixture is cooled to room temperature, 0.3 ml of pyridine is added, phosgene is passed into the reaction mixture, and the solution is heated at reflux for 4 h. The reaction mixture is concentrated to give 6.3 g of an oil which is employed directly in the subsequent reaction (Examples m, n, o).

m) 2-Methoxycarbonyl-5-(N-methoxycarbonyl-N-methylamino)-N-[(4,6-dimethylpyrimidin-2-yl)aminocarbonyl]benzenesulfonamide (see Table 1, Example 1,183)

A solution of 2.1 g of 2-methoxycarbonyl-5-(N-methoxycarbonylmethylamino)benzenesulfonyl isocyanate (Example 1) in 20 ml of dichloroethane is added to a solution of 0.8 g of 2-amino-4,6-dimethylpyrimidine in 20 ml of dichloroethane. The reaction mixture is stirred for 8 h at 40° C. and then concentrated. The residue is induced to form the product by stirring intensively and successively with 1N hydrochloric acid and methanol, to give 0.47 g of the desired sulfonylurea as a solid foam:

¹H NMR (DMSO, 80 MHz); δ (ppm)=2.5 (s, 6H, 2 CH₃), 3.3 (s, 3H, N—CH₃), 3.7 (s, 3H, O—CH₃), 3.9 (s, 3H, OCH₃), 7.0 (s, 1H, H_{pyrimidine}), 7.8 (s, 2H, 3-H and 4-H), 8.1 (s, 1H, 6-H), 10.6 (s, 1H, NH), 13.3 (s, 1H, SO₂—NH).

n) N-[(4-Chloro-6-methoxy-2-pyrimidin-2-yl)aminocarbonyl]-2-methoxycarbonyl-5-(N-methoxycarbonyl-N-methylamino)benzenesulfonamide (see Table 1, Example 1,185)

By analogy with Example m), 0.9 g of 2-amino-4-chloro-6-methoxy-2-pyrimidine is reacted with 2.1 g of 2-methoxycarbonyl-5-(N-methoxycarbonyl-N-methylamino)benzenesulfonyl isocyanate (Example 1). Yield: 0.45 g of the desired sulfonylurea as a solid foam:

¹H NMR (DMSO, 80 MHz): δ (ppm)=3.3 (s, 3H, N—CH₃), 3.7 (s, 3H, O—CH₃), 3.8 (s, 3H, O—CH₃), 4.0 (s, 3H, O—CH₃), 6.8 (s, 1H, H_{pyrimidine}), 7.7 (s, 2H, 3-H and 4-H), 10.9 (s, 1H, NH), 12.0 (s, 1H, SO₂—NH).

o) N-[N-(4-Methoxy-6-methyltriazin-2-yl)aminocarbonyl]-2-methoxycarbonyl-5-(N-methoxycarbonyl-N-methylamino)benzenesulfonamide (see Table 1, Example 1,180)

By analogy with Example m), 0.85 g of 2-amino-4-methoxy-6-methyltriazine is reacted with 2.1 g of

2-methoxycarbonyl-5-(N-methoxycarbonyl-N-methylamino)benzenesulfonyl isocyanate (Example 1)).
Yield: 0.47 g of the desired sulfonylurea as a solid foam:

¹H NMR (DMSO, 80 MHz): δ (ppm)=2.4 (s, 3H, CH₃), 3.3 (s, 3H, N—CH₃), 3.7 (s, 3H, OCH₃), 3.8 (s, 3H, OCH₃), 4.0 (s, 3H, O—CH₃), 7.8 (s, 2H, 3-H, 4-H), 8.1 (s, 1H, 6-H), 11.0 (s, 1H, NH), 12.3 (s, 1H, SO₂NH).

The remainder of the compounds described in Table 1 are obtained in a manner analogous to Examples a) to o).

The following abbreviations are used in Table 1:

No.=Example number

m.p.=solidification point (melting point) in °C.

Me=methyl

Et=ethyl

Pr=n-propyl

n-Pr=n-propyl

i-Pr=i-propyl

c-Pr=cyclopropyl

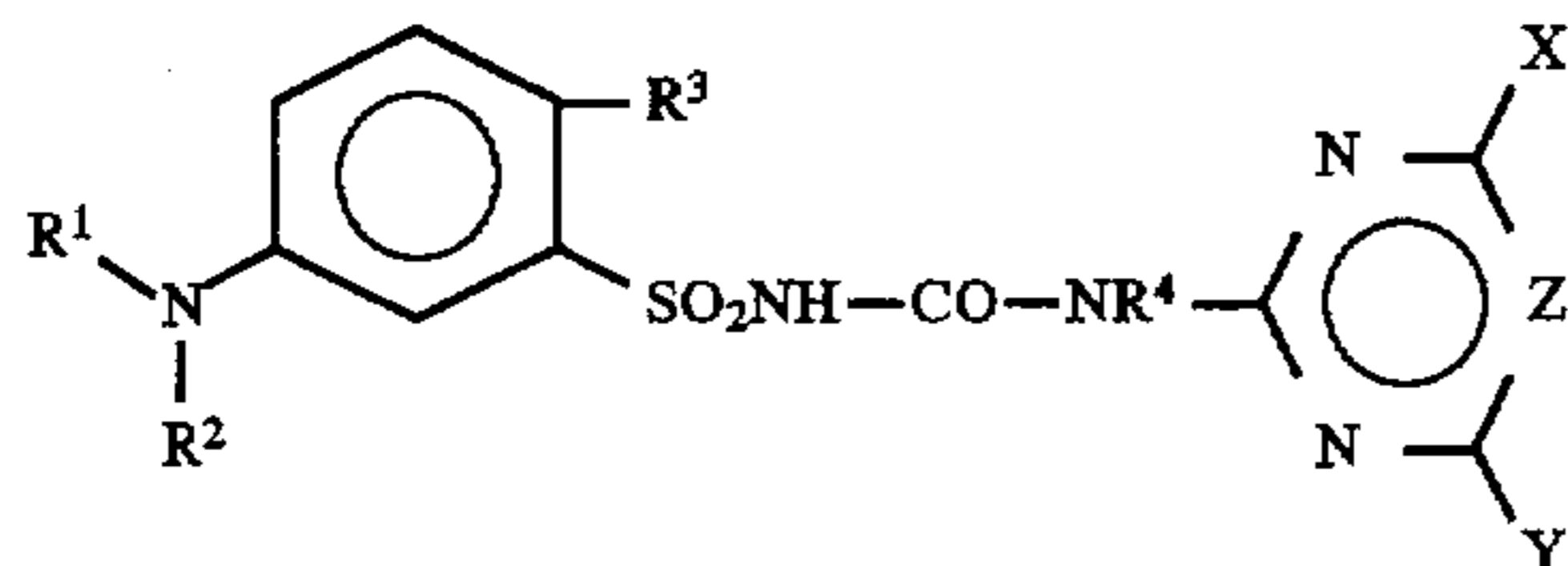
Bu=butyl

Ph=phenyl.

TABLE 1

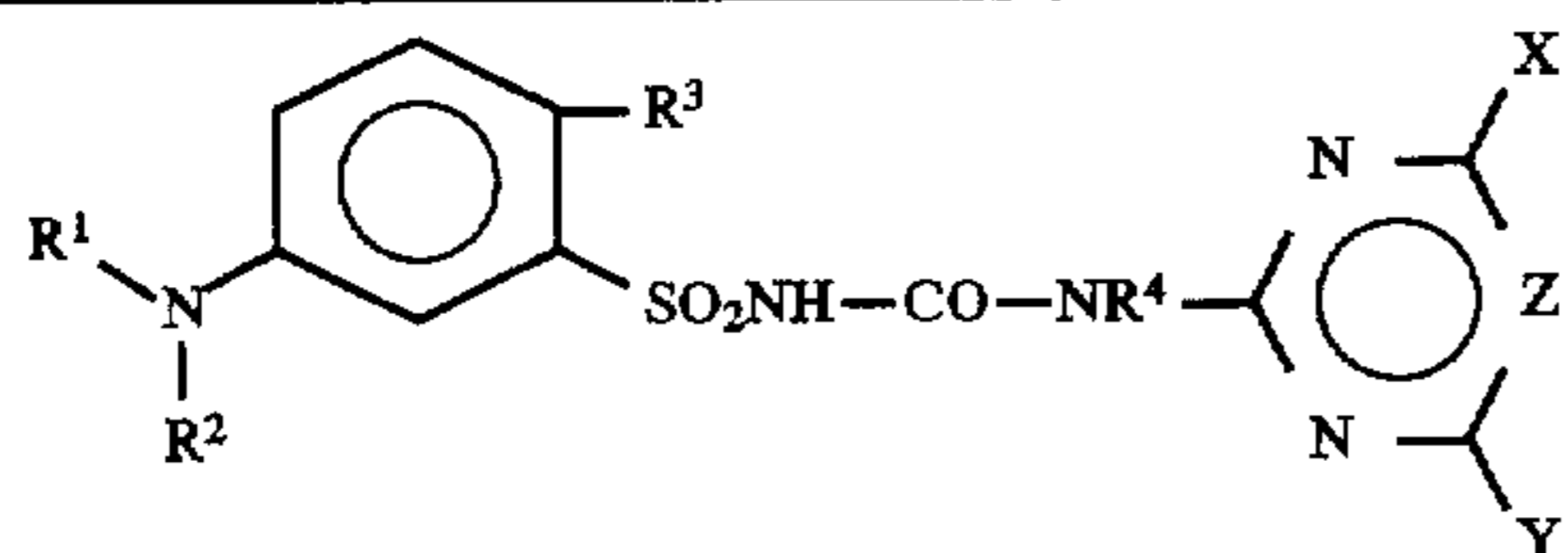
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2	Et	"	"	"	"	"	"	
3	Me	COCH ₂ NHCO ₂ Me	"	"	"	"	"	
4	Me	COCH ₂ SMe	"	"	"	"	"	
5	"	"	"	Me	"	"	"	
6	"	"	"	H	OMe	Me	N	
7	"	"	"	"	Me	Me	CH	
8	Et	"	"	"	"	"	"	
9	"	"	"	"	OMe	"	N	
10	"	"	"	"	OMe	OMe	N	
11	Me	CHO	"	"	OMe	OMe	CH	177-182
12	"	"	"	"	OMe	OMe	N	180-181
13	"	"	"	"	OMe	Me	N	160-164
14	"	"	"	"	OMe	Me	CH	
15	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	93-95
16	"	"	"	"	Me	Me	CH	161-164
17	"	"	"	"	Me	Me	N	
18	"	"	"	"	Cl	OMe	CH	184-186
19	"	"	"	Me	OMe	OMe	CH	
20	"	"	"	Me	OMe	Me	N	
21	"	"	CO ₂ Et	H	OMe	OMe	CH	
22	"	"	"	"	OMe	Cl	CH	
23	"	"	"	"	Me	Me	CH	
24	"	"	"	"	OMe	Me	N	
25	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
26	"	"	"	Me	OMe	OMe	CH	
27	"	"	"	Me	OMe	Me	N	
28	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
29	"	"	"	"	OMe	OMe	N	
30	"	"	"	"	OMe	Me	N	
31	"	"	"	"	Me	Me	CH	
32	"	"	"	"	OMe	Cl	CH	
33	"	"	"	Me	Me	OMe	N	
34	"	"	"	Me	OMe	OMe	CH	
35	Me	CHO	CO ₂ -i-Pr	H	OMe	OMe	CH	
36	"	"	"	"	OMe	OMe	N	
37	"	"	"	"	OMe	Me	N	
38	"	"	"	"	OMe	Cl	CH	
39	"	"	"	"	Me	Me	CH	
40	"	"	"	"	SMe	NEt ₂	N	
41	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
42	"	"	"	Me	OMe	OMe	CH	
43	Me	CHO	CO ₂ -Allyl	H	OMe	OMe	CH	
44	Et	CHO	CO ₂ Me	H	OMe	OMe	CH	161-163
45	"	"	"	"	OMe	Me	N	
46	"	"	"	"	Me	Me	CH	
47	"	"	"	"	Cl	OMe	CH	
48	"	"	"	Me	OMe	OMe	CH	
49	"	"	"	Me	OMe	Me	N	
50	"	"	CO ₂ Et	H	OMe	OMe	CH	
51	"	"	"	"	OMe	Me	CH	
52	"	"	"	"	Cl	OMe	CH	
53	"	"	"	"	OMe	Me	N	

TABLE 1-continued



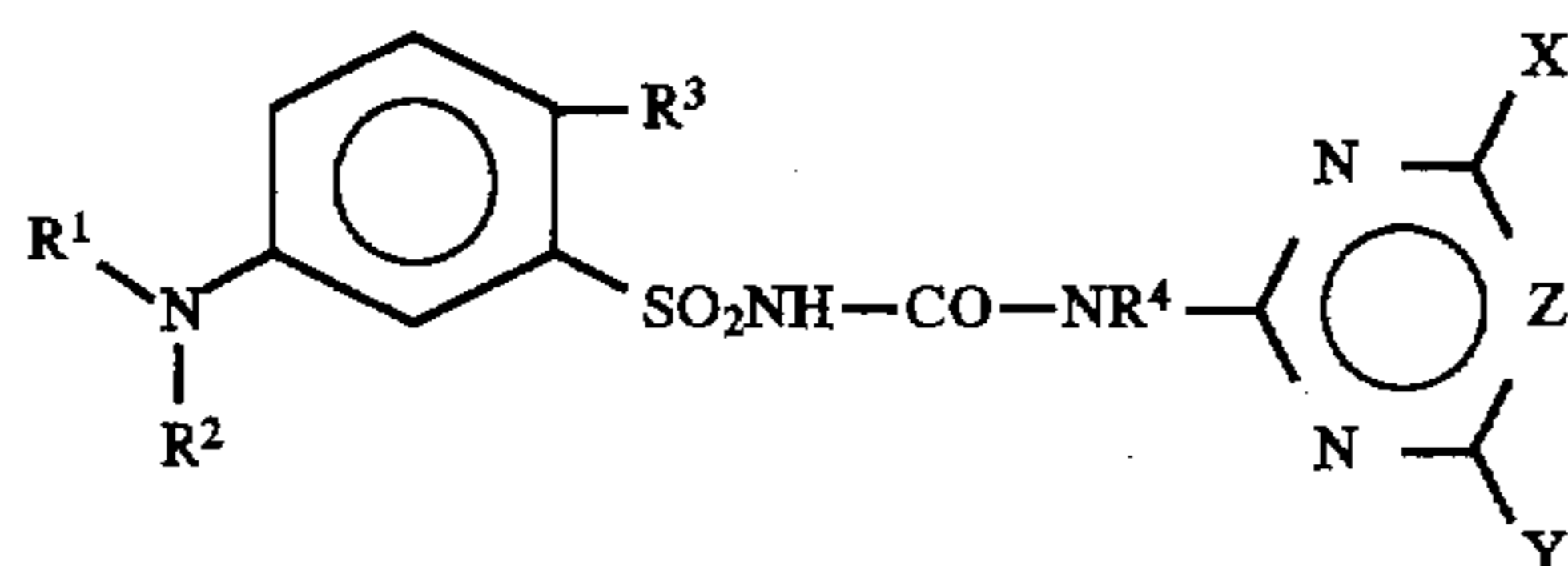
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56	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
57	"	"	"	"	OMe	Me	N	
58	"	"	"	"	OMe	Cl	CH	
59	"	"	"	"	Me	Me	CH	
60	"	"	"	Me	OMe	OMe	CH	
61	"	"	"	Me	OMe	Me	N	
62	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
63	"	"	"	"	OMe	Me	N	
64	"	"	"	"	Me	Me	CH	
65	"	"	"	Me	OMe	Me	N	
66	n-Pr	CHO	CO ₂ Me	H	OMe	OMe	CH	
67	"	"	"	"	OMe	Cl	CH	
68	"	"	"	"	Me	Me	CH	
69	"	"	"	"	OMe	Me	N	
70	"	"	"	Me	OMe	OMe	CH	
71	"	"	"	Me	OMe	Me	N	
72	n-Pr	"	CO ₂ Et	H	OMe	Me	N	
73	"	"	"	"	OMe	OMe	CH	
74	"	"	"	"	Me	Me	CH	
75	"	"	CO ₂ n-Pr	"	OMe	OMe	CH	
76	i-Pr	"	CO ₂ Me	H	OMe	OMe	CH	
77	"	"	"	"	OMe	Me	N	
78	"	"	"	"	Me	Me	CH	
79	"	"	"	"	Cl	OMe	N	
80	"	"	"	Me	OMe	Me	N	
81	"	"	"	Me	OMe	OMe	CH	
82	Allyl	"	CO ₂ Me	H	OMe	OMe	CH	
83	"	"	"	"	OMe	Cl	CH	
84	"	"	"	"	Me	Me	CH	
85	"	"	"	"	OMe	Me	N	
86	"	"	CO ₂ Et	"	OMe	OMe	CH	
87	"	"	CO ₂ n-Pr	"	OMe	OMe	CH	
88	"	"	CO ₂ i-Pr	"	OMe	OMe	CH	
89	Me	CO-CH ₃	CO ₂ Me	"	OMe	OMe	CH	197° C.
90	"	"	"	"	OMe	OMe	N	198-200
91	"	"	"	"	OMe	Me	N	191-193
92	"	"	"	"	OMe	Me	CH	204
93	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	115-118
94	"	"	"	"	Me	Me	CH	192-193
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98	"	"	"	Me	OMe	Me	N	
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103	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
104	"	"	"	Me	OMe	OMe	CH	
105	"	"	"	Me	OMe	Me	N	
106	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
107	"	"	"	"	OMe	OMe	N	
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109	"	"	"	"	Me	Me	CH	
110	"	"	"	"	OMe	Cl	CH	
111	"	"	"	Me	Me	OMe	N	
112	"	"	"	Me	OMe	OMe	CH	
113	Me	COCH ₃	CO ₂ -i-Pr	H	OMe	OMe	CH	
114	"	"	"	"	OMe	OMe	N	
115	"	"	"	"	OMe	Me	N	
116	"	"	"	"	OMe	Cl	CH	
117	"	"	"	"	Me	Me	CH	
118	"	"	"	"	SMe	NEt ₂	N	
119	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
120	"	"	"	Me	OMe	OMe	CH	
121	Me	COCH ₃	CO ₂ -Allyl	H	OMe	OMe	CH	

TABLE 1-continued



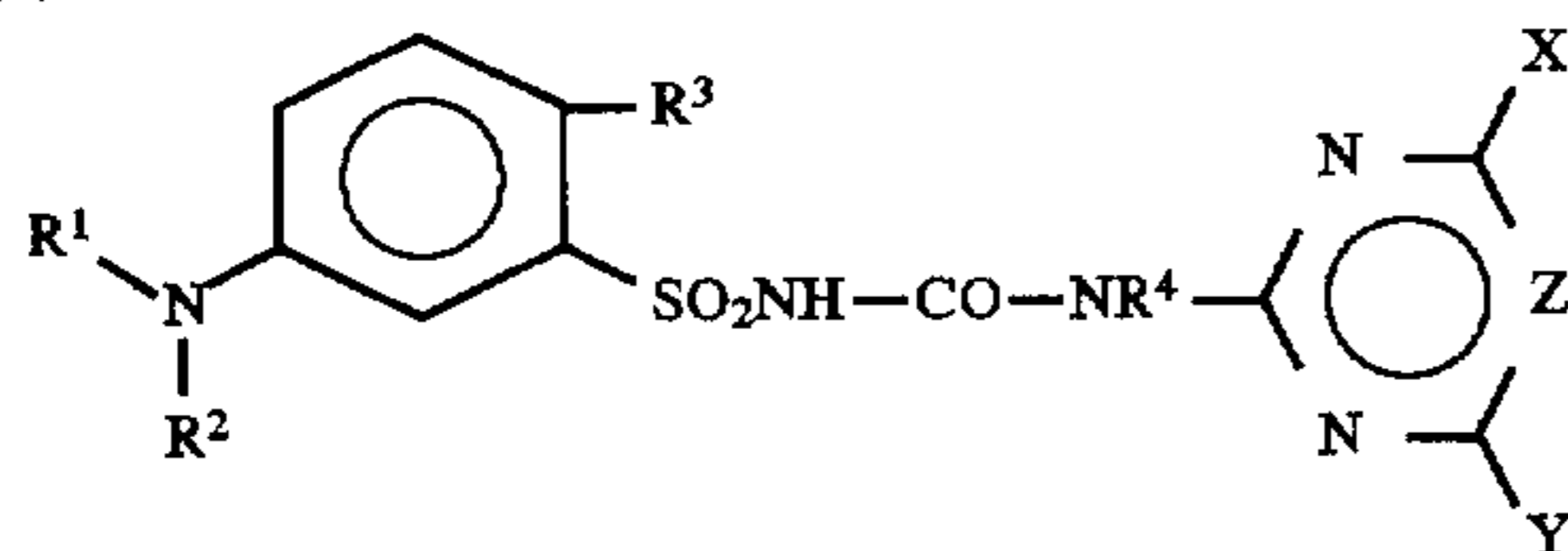
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124	"	"	"	"	Me	Me	CH	
125	"	"	"	"	Cl	OMe	CH	
126	"	"	"	Me	OMe	OMe	CH	
127	"	"	"	Me	OMe	Me	N	
128	"	"	CO ₂ Et	H	OMe	OMe	CH	
129	"	"	"	"	OMe	Me	CH	
130	"	"	"	"	Cl	OMe	CH	
131	"	"	"	"	OMe	Me	N	
132	"	"	"	Me	OMe	OMe	CH	
133	"	"	"	Me	OMe	Me	N	
134	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
135	"	"	"	"	OMe	Me	N	
136	"	"	"	"	OMe	Cl	CH	
137	"	"	"	"	Me	Me	CH	
138	"	"	"	Me	OMe	OMe	CH	
139	"	"	"	Me	OMe	Me	N	
140	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
141	"	"	"	"	OMe	Me	N	
142	"	"	"	"	Me	Me	CH	
143	"	"	"	Me	OMe	Me	N	
144	n-Pr	CO-CH ₃	CO ₂ Me	H	OMe	OMe	CH	160° C.
145	"	"	"	"	OMe	Cl	CH	
146	"	"	"	"	Me	Me	CH	
147	"	"	"	"	OMe	Me	N	
148	"	"	"	Me	OMe	OMe	CH	
149	"	"	"	Me	OMe	Me	N	
150	n-Pr	"	CO ₂ Et	H	OMe	Me	N	
151	"	"	"	"	OMe	OMe	CH	
152	"	"	"	"	Me	Me	CH	
153	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
154	i-Pr	"	CO ₂ Me	H	OMe	OMe	CH	
155	"	"	"	"	OMe	Me	N	
156	"	"	"	"	Me	Me	CH	
157	"	"	"	"	Cl	OMe	N	
158	"	"	"	Me	OMe	Me	N	
159	"	"	"	Me	OMe	OMe	CH	
160	Allyl	"	CO ₂ Me	H	OMe	OMe	CH	
161	"	"	"	"	OMe	Cl	CH	
162	"	"	"	"	Me	Me	CH	
163	"	"	"	"	OMe	Me	N	
164	"	"	CO ₂ Et	H	OMe	OMe	CH	
165	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
166	"	"	CO ₂ -i-Pr	"	OMe	OMe	CH	
167	Me	COCH ₂ CH ₃	CO ₂ Me	H	OMe	OMe	CH	186-188
168	"	"	"	"	OMe	OMe	N	
169	"	"	"	"	SMe	Me	N	
170	"	"	"	"	OMe	Me	N	174-176
171	"	"	"	"	OMe	Me	CH	
172	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
173	"	"	"	"	Me	Me	CH	161-164
174	"	"	"	"	Me	Me	N	
175	"	"	"	"	Cl	OMe	CH	149-152
176	"	"	"	Me	OMe	OMe	CH	
177	"	"	CO ₂ Me	Me	OMe	Me	N	
178	"	"	CO ₂ Et	H	OMe	OMe	CH	
179	"	"	"	"	OMe	Cl	CH	
180	"	"	"	"	Me	Me	CH	
181	"	"	"	"	OMe	Me	N	
182	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
183	"	"	"	Me	OMe	OMe	CH	
184	"	"	"	Me	OMe	Me	N	
185	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
186	"	"	"	"	OMe	OMe	N	
187	"	"	"	"	OMe	Me	N	
188	"	"	"	"	Me	Me	CH	
189	"	"	"	"	OMe	Cl	CH	

TABLE 1-continued



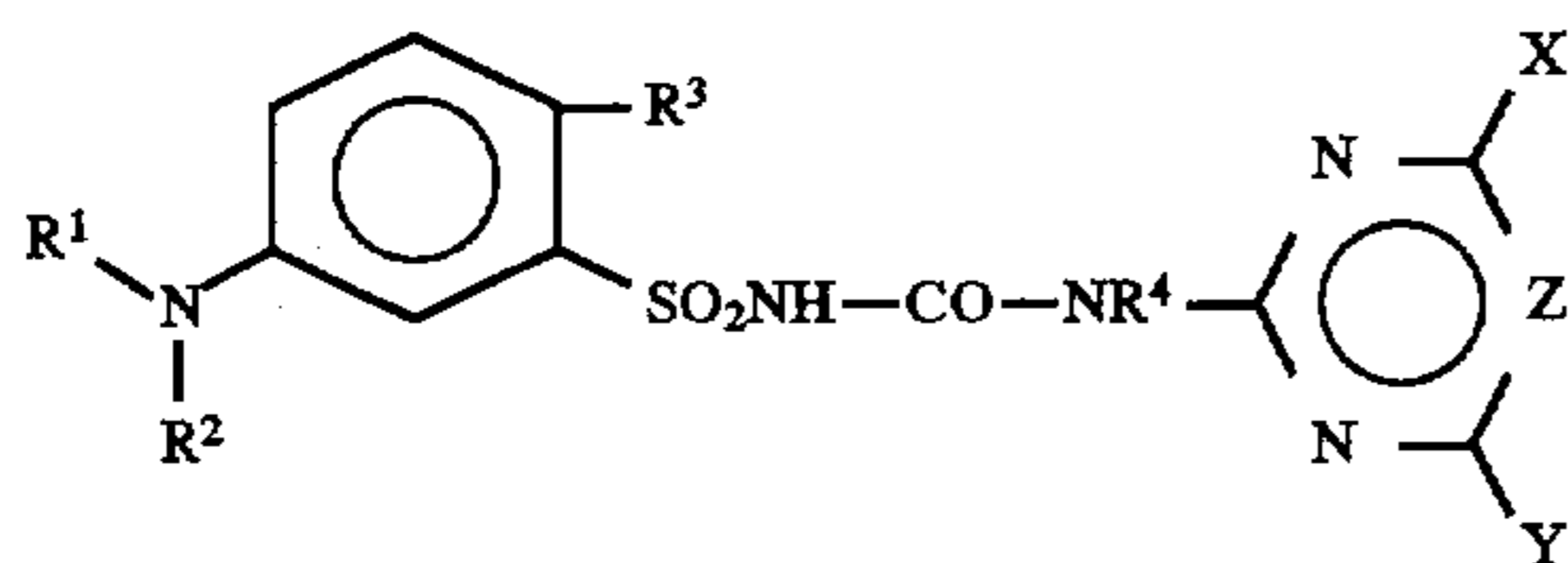
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
190	"	"	"	Me	Me	OMe	N	
191	"	"	"	"	OMe	OMe	CH	
192	Me	COCH ₂ CH ₃	CO ₂ -i-Pr	H	OMe	OMe	CH	
193	"	"	"	"	OMe	OMe	N	
194	"	"	"	"	OMe	Me	N	
195	"	"	"	"	OMe	Cl	CH	
196	"	"	"	"	Me	Me	CH	
197	"	"	"	"	SMe	NEt ₂	N	
198	"	"	"	Me	OMe	Me	N	
199	"	"	"	"	OMe	OMe	CH	
200	Me	COCH ₂ CH ₃	CO ₂ -Allyl	H	OMe	OMe	CH	
201	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
202	"	"	"	"	OMe	Me	N	
203	"	"	"	"	Me	Me	CH	
204	"	"	"	"	Cl	OMe	CH	
205	"	"	"	Me	OMe	OMe	CH	
206	"	"	"	"	OMe	Me	N	
207	"	"	CO ₂ -Et	H	OMe	OMe	CH	
208	"	"	"	"	OMe	Me	CH	
209	"	"	"	"	Cl	OMe	CH	
210	"	"	"	"	OMe	Me	N	
211	"	"	"	Me	OMe	OMe	CH	
212	"	"	"	"	"	Me	N	
213	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
214	"	"	"	"	OMe	Me	N	
215	"	"	"	"	OMe	Cl	CH	
216	"	"	"	"	Me	Me	CH	
217	"	"	"	Me	OMe	OMe	CH	
218	"	"	"	"	OMe	Me	N	
219	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
220	"	"	"	"	OMe	Me	N	
221	"	"	"	"	Me	Me	CH	
222	"	"	"	Me	OMe	Me	N	
223	n-Pr	COCH ₂ CH ₃	CO ₂ Me	H	OMe	OMe	CH	
224	"	"	"	"	OMe	Cl	CH	
225	"	"	"	"	Me	Me	CH	
226	"	"	"	"	OMe	Me	N	
227	"	"	"	Me	OMe	OMe	CH	
228	"	"	"	Me	OMe	Me	N	
229	n-Pr	"	CO ₂ Et	H	OMe	Me	N	
230	"	"	"	"	OMe	OMe	CH	
231	"	"	"	"	Me	Me	CH	
232	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
233	i-Pr	"	CO ₂ Me	H	OMe	OMe	CH	
234	"	"	"	"	OMe	Me	N	
235	"	"	"	"	Me	Me	CH	
236	"	"	"	"	Cl	OMe	N	
237	"	"	"	Me	OMe	Me	N	
238	"	"	"	Me	OMe	OMe	CH	
239	Allyl	"	CO ₂ Me	H	OMe	OMe	CH	
240	"	"	"	"	OMe	Cl	CH	
241	"	"	"	"	Me	Me	CH	
242	"	"	"	"	OMe	Me	N	
243	"	"	CO ₂ Et	H	OMe	OMe	CH	
244	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
245	"	"	CO ₂ -i-Pr	"	OMe	OMe	CH	
246	Me	CO-n-Pr	CO ₂ Me	H	OMe	OMe	CH	186-188
247	"	"	"	"	OMe	OMe	N	
248	"	"	"	"	OMe	Me	N	
249	"	"	"	"	OMe	Me	CH	
250	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
251	"	"	"	"	Me	Me	CH	
252	"	"	"	"	Me	Me	N	
253	"	"	"	"	Cl	OMe	CH	
254	"	"	"	Me	OMe	OMe	CH	
255	"	"	"	Me	OMe	Me	N	
256	"	"	CO ₂ Et	H	OMe	OMe	CH	
257	"	"	"	"	OMe	Cl	CH	

TABLE 1-continued



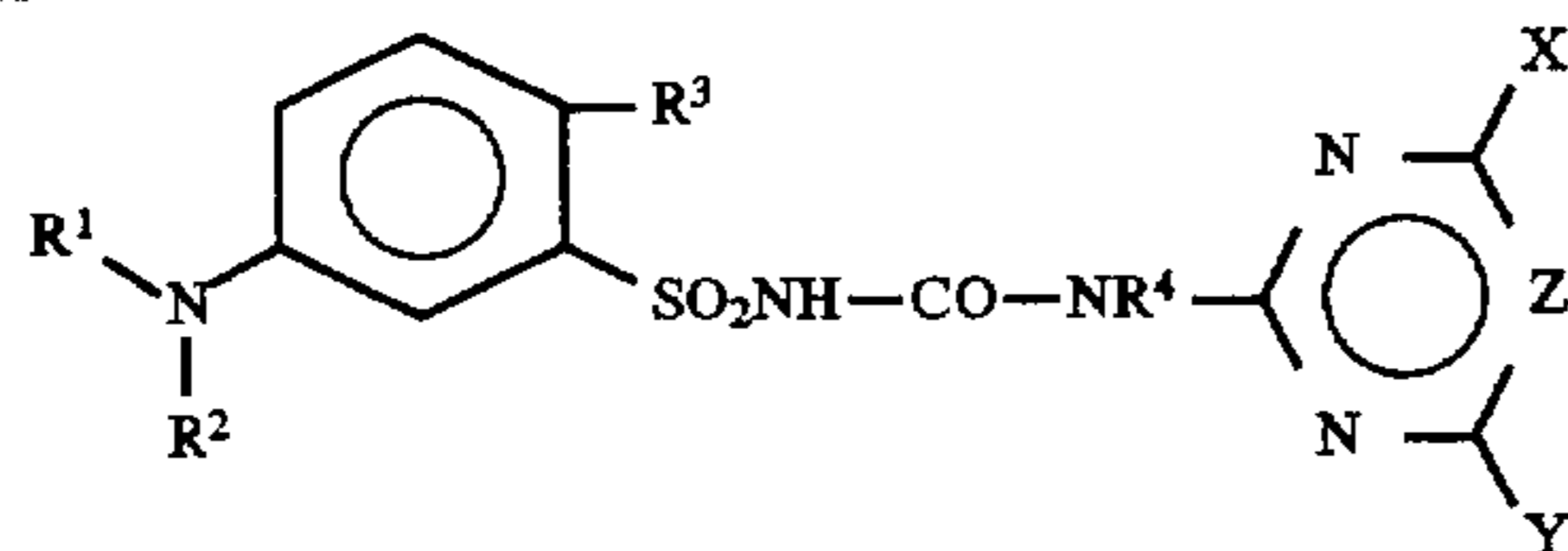
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
258	"	"	"	"	Me	Me	CH	
259	"	"	"	"	OMe	Me	N	
260	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
261	"	"	"	Me	OMe	OMe	CH	
262	"	"	"	Me	OMe	Me	N	
263	"	"	CO ₂ -n-Pr	H	OMe	OMe	N	
264	"	"	"	"	OMe	OMe	CH	
265	Me	CO-n-Pr	CO ₂ -n-Pr	H	OMe	OMe	CH	
266	"	"	"	"	OMe	OMe	N	
267	"	"	"	"	OMe	Cl	CH	
268	"	"	"	Me	Me	OMe	N	
269	"	"	"	Me	OMe	OMe	CH	
270	Me	CO-n-Pr	CO ₂ -i-Pr	H	OMe	OMe	CH	
271	"	"	"	"	OMe	OMe	N	
272	"	"	"	"	OMe	Me	N	
273	"	"	"	"	OMe	Cl	CH	
274	"	"	"	"	Me	Me	CH	
275	"	"	"	"	SMe	NEt ₂	N	
276	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
277	"	"	"	Me	OMe	OMe	CH	
278	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
279	Et	"	CO ₂ Me	H	OMe	OMe	CH	
280	"	"	"	"	OMe	Me	N	
281	"	"	"	"	Me	Me	CH	
282	"	"	"	"	Cl	OMe	CH	
283	"	"	"	Me	OMe	OMe	CH	
284	"	"	"	Me	OMe	Me	N	
285	"	"	CO ₂ Et	H	OMe	OMe	CH	
286	"	"	"	"	OMe	Me	CH	
287	"	"	"	"	Cl	OMe	CH	
288	"	"	"	"	OMe	Me	N	
289	"	"	"	Me	OMe	OMe	CH	
290	"	"	"	Me	OMe	Me	N	
291	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
292	"	"	"	"	OMe	Me	N	
293	"	"	"	"	OMe	Cl	CH	
294	"	"	"	"	Me	Me	CH	
295	"	"	"	Me	OMe	OMe	CH	
296	"	"	"	Me	OMe	Me	N	
297	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
298	"	"	"	"	OMe	Me	N	
299	n-Pr	CO-n-Pr	CO ₂ -Me	H	OMe	OMe	CH	
300	"	"	"	"	OMe	Cl	CH	
301	"	"	"	"	Me	Me	CH	
302	"	"	"	"	OMe	Me	N	
303	"	"	"	Me	OMe	OMe	CH	
304	"	"	"	Me	OMe	Me	N	
305	n-Pr	"	CO ₂ Et	H	OMe	Me	N	
306	"	"	"	"	OMe	OMe	CH	
307	"	"	"	"	Me	Me	CH	
308	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
309	i-Pr	"	CO ₂ Me	H	OMe	OMe	CH	
310	"	"	"	"	OMe	Me	N	
311	"	"	"	"	Me	Me	CH	
312	"	"	"	"	Cl	OMe	N	
313	"	"	"	Me	OMe	Me	N	
314	"	"	"	Me	OMe	OMe	CH	
315	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
316	"	"	"	"	OMe	Cl	CH	
317	"	"	"	"	Me	Me	CH	
318	"	"	"	"	OMe	Me	N	
319	"	"	CO ₂ Et	H	OMe	OMe	CH	
320	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
321	"	"	CO ₂ -i-Pr	"	OMe	OMe	CH	
322	Me	CO-i-Pr	CO ₂ -Me	H	OMe	OMe	CH	150
323	"	"	"	"	OMe	OMe	N	
324	"	"	"	"	"	Me	N	165-167
325	"	"	"	"	"	"	CH	185-187

TABLE 1-continued



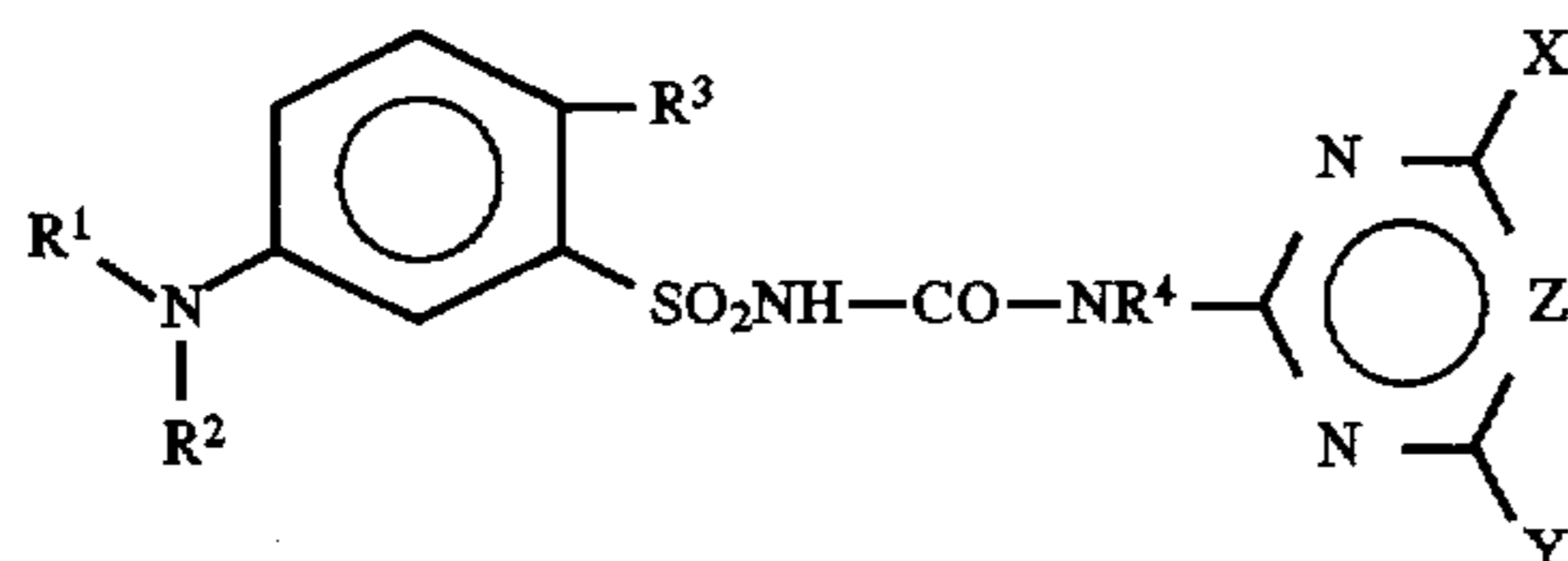
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
326	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
327	"	"	"	"	Me	Me	CH	105-110
328	"	"	"	"	Me	Me	N	
329	"	"	"	"	Cl	OMe	CH	
330	"	"	"	Me	OMe	OMe	CH	
331	"	"	"	"	"	Me	N	
332	"	"	CO ₂ -Et	H	OMe	OMe	CH	
333	"	"	"	"	"	Cl	CH	
334	"	"	"	"	Me	Me	CH	
335	"	"	"	"	OMe	Me	N	
336	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
337	"	"	"	Me	OMe	OMe	CH	
338	"	"	"	"	OMe	Me	N	
339	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
340	"	"	"	"	"	"	N	
341	"	"	"	"	OMe	Me	N	
342	"	"	"	"	Me	Me	CH	
343	"	"	"	"	OMe	Cl	CH	
344	"	"	"	Me	Me	OMe	N	
345	"	"	"	"	OMe	OMe	CH	
346	Me	CO-i-Pr	CO ₂ -i-Pr	H	OMe	OMe	CH	
347	"	"	"	"	"	"	N	
348	"	"	"	"	OMe	Me	N	
349	"	"	"	"	OMe	Cl	CH	
350	"	"	"	"	Me	Me	CH	
351	"	"	"	"	SMe	NEt ₂	N	
352	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
353	"	"	"	"	OMe	OMe	CH	
354	Me	COCHMe ₂	CH ₂ CHCH ₂	H	OMe	OMe	CH	
355	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
356	"	"	"	H	OMe	Me	N	
357	"	"	"	"	Me	Me	CH	
358	"	"	"	"	Cl	OMe	CH	
359	"	"	"	Me	OMe	OMe	CH	
360	"	"	"	"	OMe	Me	N	
361	"	"	CO ₂ -Et	H	OMe	OMe	CH	
362	"	"	"	"	OMe	Me	CH	
363	"	"	"	"	Cl	OMe	CH	
364	"	"	"	"	OMe	Me	N	
365	"	"	"	Me	OMe	OMe	CH	
366	"	"	"	"	"	Me	N	
367	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
368	"	"	"	"	OMe	Me	N	
369	"	"	"	"	OMe	Cl	CH	
370	"	"	"	"	Me	Me	CH	
371	"	"	"	Me	OMe	OMe	CH	
372	"	"	"	"	OMe	Me	N	
373	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
374	"	"	"	"	OMe	Me	N	
375	"	"	"	"	Me	Me	CH	
376	"	"	"	Me	OMe	Me	N	
377	n-Pr	CO-i-Pr	CO ₂ -Me	H	OMe	OMe	CH	
378	"	"	"	"	"	Cl	CH	
379	"	"	"	"	Me	Me	CH	
380	"	"	"	"	OMe	Me	N	
381	"	"	"	Me	OMe	OMe	CH	
382	"	"	"	"	OMe	Me	N	
383	n-Pr	"	CO ₂ -Et	H	"	Me	N	
384	"	"	"	"	"	OMe	CH	
385	"	"	"	"	Me	Me	CH	
386	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
387	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
388	"	"	"	"	OMe	Me	N	
389	"	"	"	"	Me	Me	CH	
390	"	"	"	"	Cl	OMe	N	
391	"	"	"	Me	OMe	Me	N	
392	"	"	"	"	"	OMe	CH	
393	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	

TABLE 1-continued



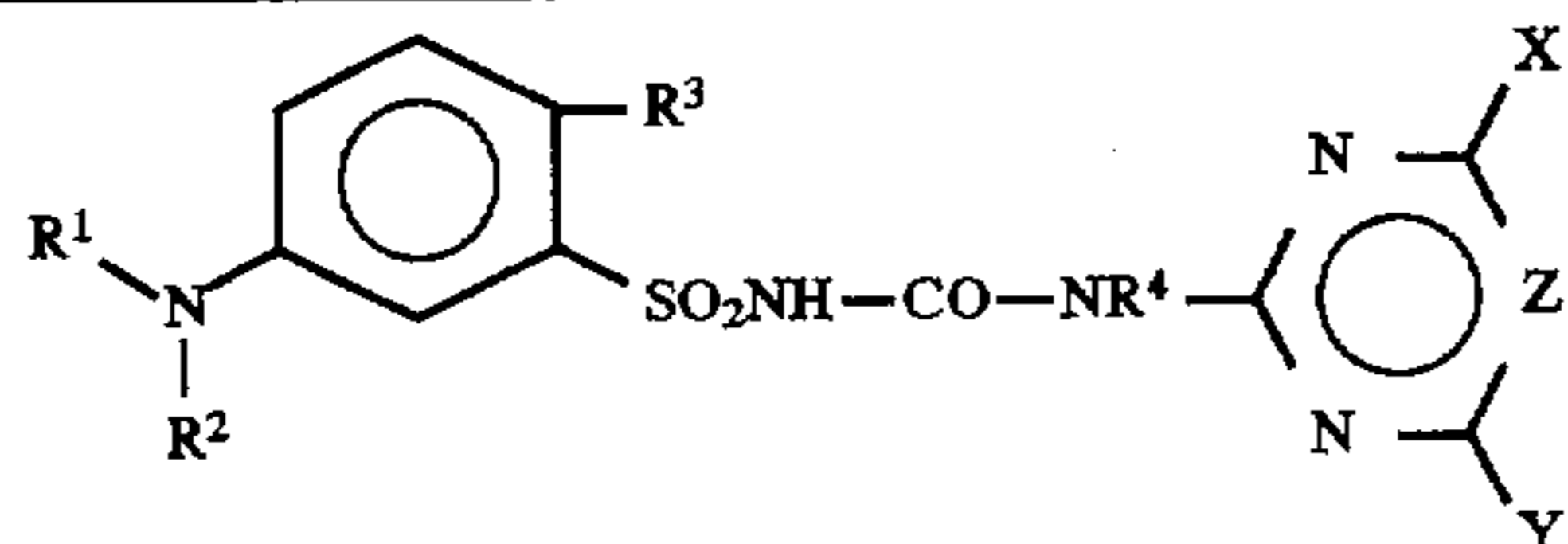
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
394	"	"	"	"	"	Cl	CH	
395	"	"	"	"	Me	Me	CH	
396	"	"	"	"	OMe	Me	N	
397	"	"	CO ₂ -Et	H	OMe	OMe	CH	
398	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
399	"	"	CO ₂ -i-Pr	"	"	"	"	
400	Me	CO-t-Bu	CO ₂ -Me	H	OMe	OMe	CH	
401	"	"	"	"	"	OMe	N	
402	"	"	"	"	"	Me	N	
403	"	"	"	"	"	"	CH	
404	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
405	"	"	"	"	Me	Me	CH	
406	"	"	"	"	"	"	N	
407	"	"	"	"	Cl	OMe	CH	
408	"	"	"	Me	OMe	OMe	CH	
409	"	"	"	"	"	Me	N	
410	"	"	CO ₂ -Et	H	OMe	OMe	CH	
411	"	"	"	"	"	Cl	CH	
412	"	"	"	"	Me	Me	CH	
413	"	"	"	"	OMe	Me	N	
414	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
415	"	"	"	Me	OMe	OMe	CH	
416	"	"	"	"	OMe	Me	N	
417	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
418	"	"	"	"	"	"	N	
419	"	"	"	"	OMe	Me	N	
420	"	"	"	"	Me	Me	CH	
421	"	"	"	"	OMe	Cl	CH	
422	"	"	"	Me	Me	OMe	N	
423	"	"	"	"	OMe	OMe	CH	
424	Me	CO-t-Bu	CO ₂ -i-Pr	H	OMe	OMe	CH	
425	"	"	"	"	"	"	N	
426	"	"	"	"	H	Me	N	
427	"	"	"	"	OMe	Cl	CH	
428	"	"	"	"	Me	Me	CH	
429	"	"	"	"	SMe	NEt ₂	N	
430	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
431	"	"	"	Et	OMe	OMe	CH	
432	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
433	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
434	"	"	"	H	OMe	Me	N	
435	"	"	"	"	Me	Me	CH	
436	"	"	"	"	Cl	OMe	CH	
437	"	"	"	Me	OMe	OMe	CH	
438	"	"	"	"	OMe	Me	N	
439	"	"	CO ₂ -Et	H	OMe	OMe	CH	
440	"	"	"	"	OMe	Me	CH	
441	"	"	"	"	Cl	OMe	CH	
442	"	"	"	"	OMe	Me	N	
443	"	"	"	Me	OMe	OMe	CH	
444	"	"	"	"	"	Me	N	
445	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
446	"	"	"	"	OMe	Me	N	
447	"	"	"	"	OMe	Cl	CH	
448	"	"	"	"	Me	Me	CH	
449	"	"	"	Me	OMe	OMe	CH	
450	"	"	"	"	OMe	Me	N	
451	"	"	CO ₂ -iPr	H	OMe	OMe	CH	
452	"	"	"	"	OMe	Me	N	
453	"	"	"	"	Me	Me	CH	
454	"	"	"	Me	OMe	Me	N	
455	n-Pr	CO-t-Bu	CO ₂ -Me	H	OMe	OMe	CH	
456	"	"	"	"	OMe	Cl	CH	
457	"	"	"	"	Me	Me	CH	
458	"	"	"	"	OMe	Me	N	
459	"	"	"	Me	OMe	OMe	CH	
460	n-Pr	"	CO ₂ -Et	Me	OMe	Me	N	
461	n-Pr	"	CO ₂ -Et	H	OMe	Me	N	

TABLE 1-continued



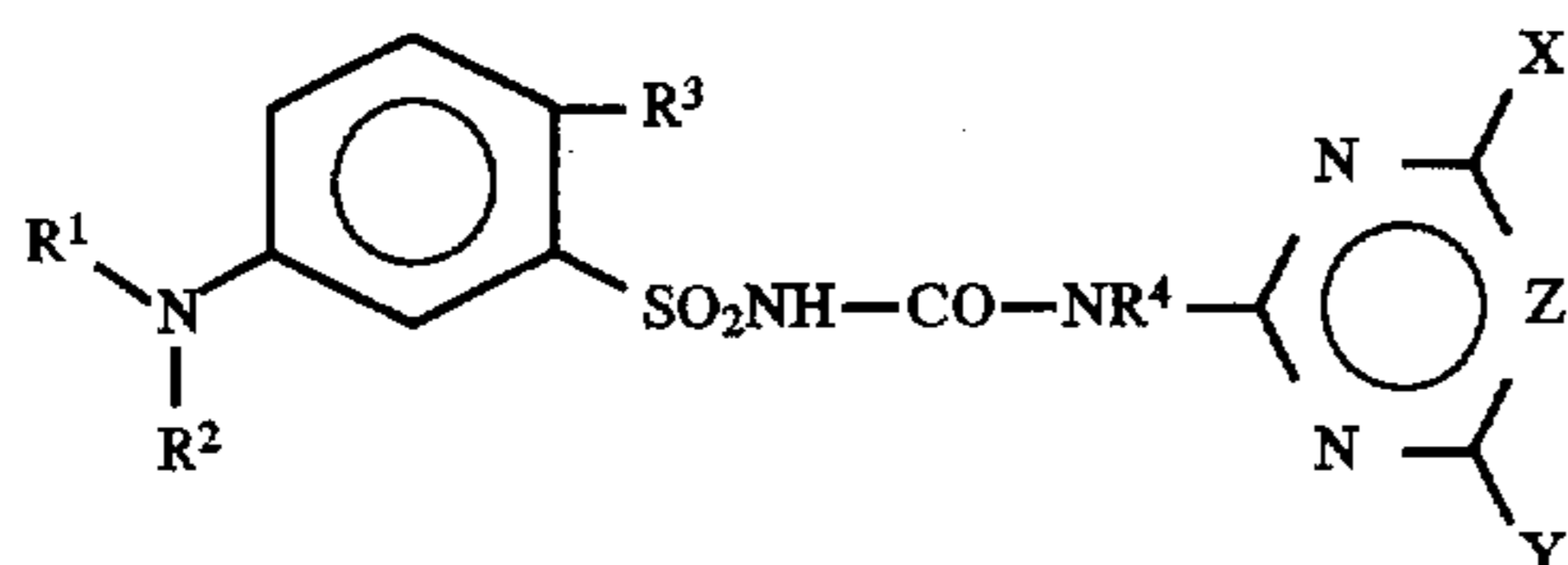
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
462	"	"	"	"	OMe	OMe	CH	
463	"	"	"	"	Me	Me	CH	
464	i-Pr	"	CO ₂ -Me	"	OMe	OMe	CH	
465	i-Pr	"	"	Me	OMe	OMe	CH	
466	"	"	"	H	OMe	Me	N	
467	"	"	"	"	Me	Me	CH	
468	"	"	"	"	Cl	OMe	N	
469	"	"	"	Me	OMe	Me	N	
470	Allyl	"	"	H	OMe	OMe	CH	
471	"	"	"	H	OMe	Cl	CH	
472	"	"	"	"	OMe	Me	N	
473	"	"	"	"	Me	Me	CH	
474	"	"	CO ₂ -Et	H	OMe	OMe	CH	
475	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
476	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
477	Me	CO-c-Propyl	CO ₂ -Me	H	OMe	OMe	CH	161° C
478	"	"	"	"	"	OMe	N	
479	"	"	"	"	"	Me	N	
480	"	"	"	"	"	"	CH	
481	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
482	"	"	"	"	Me	Me	CH	
483	"	"	"	"	"	"	N	
484	"	"	"	"	Cl	OMe	CH	
485	"	"	"	Me	OMe	OMe	CH	
486	"	"	"	"	"	Me	N	
487	"	"	CO ₂ -Et	H	OMe	OMe	CH	
488	"	"	"	"	"	Cl	CH	
489	"	"	"	"	Me	Me	CH	
490	"	"	"	"	OMe	Me	N	
491	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
492	"	"	"	Me	OMe	OMe	CH	
493	"	"	"	"	OMe	Me	N	
494	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
495	"	"	"	"	"	"	N	
496	"	"	"	"	OMe	Me	N	
497	"	"	"	"	Me	Me	CH	
498	"	"	"	"	OMe	Cl	CH	
499	"	"	"	Me	Me	OMe	N	
500	"	"	"	"	OMe	OMe	CH	
501	Me	CO-c-Propyl	CO ₂ -i-Pr	H	OMe	OMe	CH	
502	"	"	"	"	"	"	N	
503	"	"	"	"	OMe	Me	N	
504	"	"	"	"	OMe	Cl	CH	
505	"	"	"	"	Me	Me	CH	
506	"	"	"	"	SMe	NEt ₂	N	
507	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
508	"	"	"	"	OMe	OMe	CH	
509	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
510	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
511	"	"	"	H	OMe	Me	N	
512	"	"	"	"	Me	Me	CH	
513	"	"	"	"	Cl	OMe	CH	
514	"	"	"	Me	OMe	OMe	CH	
515	"	"	"	"	OMe	Me	N	
516	"	"	CO ₂ -Et	H	OMe	OMe	CH	
517	"	"	"	"	Me	Me	CH	
518	"	"	"	"	Cl	OMe	CH	
519	"	"	"	"	OMe	Me	N	
520	"	"	"	Me	OMe	OMe	CH	
521	"	"	"	"	"	Me	N	
522	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
523	"	"	"	"	OMe	Me	N	
524	"	"	"	"	OMe	Cl	CH	
525	"	"	"	"	Me	Me	CH	
526	"	"	"	Me	OMe	OMe	CH	
527	"	"	"	"	OMe	Me	N	
528	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
529	"	"	"	"	OMe	Me	N	

TABLE 1-continued



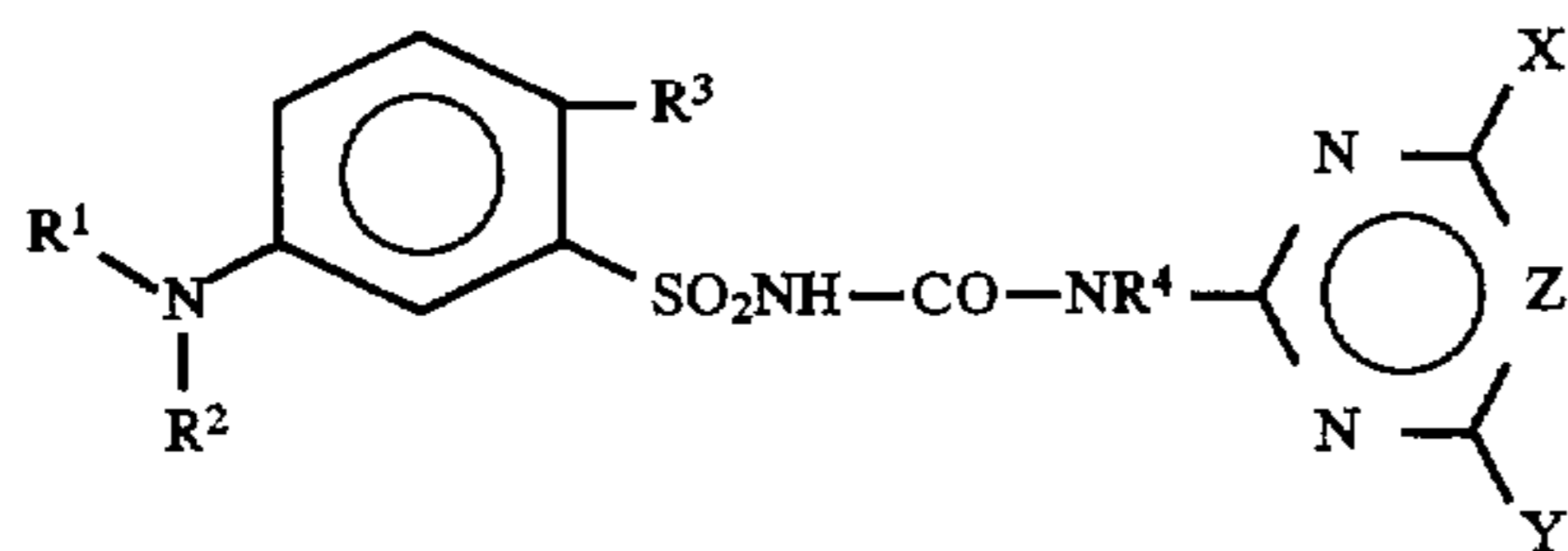
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
530	"	"	"	"	Me	Me	CH	
531	"	"	"	Me	OMe	Me	N	
532	n-Pr	CO-c-Propyl	CO ₂ -Me	H	OMe	OMe	CH	
533	"	"	"	"	"	Cl	CH	
534	"	"	"	"	Me	Me	CH	
535	"	"	"	"	OMe	Me	N	
536	"	"	"	Me	OMe	OMe	CH	
537	"	"	"	"	OMe	Me	N	
538	n-Pr	"	CO ₂ -Et	H	"	"	N	
539	"	"	"	"	"	OMe	CH	
540	"	"	"	"	Me	Me	CH	
541	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
542	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
543	"	"	"	"	OMe	Me	N	
544	"	"	"	"	Me	Me	CH	
545	"	"	"	"	Cl	OMe	N	
546	"	"	"	Me	OMe	Me	N	
547	"	"	"	"	"	OMe	CH	
548	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
549	"	"	"	"	"	Cl	CH	
550	"	"	"	"	Me	Me	CH	
551	"	"	"	"	OMe	Me	N	
552	"	"	CO ₂ -Et	H	OMe	OMe	CH	
553	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
554	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
555	Me	CO-n-C ₅ H ₁₁	CO ₂ -Me	H	OMe	OMe	CH	191-192
556	"	"	"	"	OMe	OMe	N	
557	"	"	"	"	"	Me	N	
558	"	"	"	"	"	"	CH	
559	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
560	"	"	"	"	Me	Me	CH	
561	"	"	"	"	"	"	N	
562	"	"	"	"	Cl	OMe	CH	
563	"	"	"	Me	OMe	OMe	CH	
564	"	"	"	"	"	Me	N	
565	"	"	CO ₂ -Et	H	OMe	OMe	CH	
566	"	"	"	"	"	Cl	CH	
567	"	"	"	"	Me	Me	CH	
568	"	"	"	"	OMe	Me	N	
569	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
570	"	"	"	Me	OMe	OMe	CH	
571	"	"	"	"	OMe	Me	N	
572	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
573	"	"	"	"	"	"	N	
574	"	"	"	"	OMe	Me	N	
575	"	"	"	"	Me	Me	CH	
576	"	"	"	"	OMe	Cl	CH	
577	"	"	"	Me	Me	OMe	N	
578	"	"	"	"	OMe	OMe	CH	
579	Me	CO-n-C ₅ H ₁₁	CO ₂ -i-Pr	H	OMe	OMe	CH	
580	"	"	"	"	"	"	N	
581	"	"	"	"	H	Me	N	
582	"	"	"	"	OMe	Cl	CH	
583	"	"	"	"	Me	Me	CH	
584	"	"	"	"	SMe	NEt ₂	N	
585	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
586	"	"	"	"	OMe	OMe	CH	
587	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
588	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
589	"	"	"	H	OMe	Me	N	
590	"	"	"	"	Me	Me	CH	
591	"	"	"	"	Cl	OMe	CH	
592	"	"	"	Me	OMe	OMe	CH	
593	"	"	"	"	OMe	Me	N	
594	"	"	CO ₂ -Et	H	OMe	OMe	CH	
595	"	"	"	"	OMe	Me	CH	
596	"	"	"	"	Cl	OMe	CH	
597	"	"	"	"	OMe	Me	N	

TABLE 1-continued



No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
598	"	"	"	Me	OMe	OMe	CH	
599	"	"	"	"	"	Me	N	
600	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
601	"	"	"	"	OMe	Me	N	
602	"	"	"	"	OMe	Cl	CH	
603	"	"	"	"	Me	Me	CH	
604	"	"	"	Me	OMe	OMe	CH	
605	"	"	"	"	OMe	Me	N	
606	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
607	"	"	"	"	OMe	Me	N	
608	"	"	"	"	Me	Me	CH	
609	"	"	"	Me	OMe	Me	N	
610	n-Pr	CO-n-C ₃ H ₁₁	CO ₂ -Me	H	OMe	OMe	CH	
611	"	"	"	"	"	Cl	CH	
612	"	"	"	"	Me	Me	CH	
613	"	"	"	"	OMe	Me	N	
614	"	"	"	Me	OMe	OMe	CH	
615	"	"	"	"	OMe	Me	N	
616	n-Pr	"	CO ₂ -Et	H	OMe	Me	N	
617	"	"	"	"	"	OMe	CH	
618	"	"	"	"	Me	Me	CH	
619	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
620	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
621	"	"	"	"	OMe	Me	N	
622	"	"	"	"	Me	Me	CH	
623	"	"	"	"	Cl	OMe	N	
624	"	"	"	"	Me	OMe	N	
625	"	"	"	"	"	OMe	CH	
626	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
627	"	"	"	"	"	Cl	CH	
628	"	"	"	"	Me	Me	CH	
629	"	"	"	"	OMe	Me	N	
630	"	"	CO ₂ -Et	H	OMe	OMe	CH	
631	"	"	CO ₂ -n-Pr	"	"	"	CH	
632	"	"	CO ₂ -i-Pr	"	"	"	"	
633	Me	CO-CHMeEt	CO ₂ -Me	H	OMe	OMe	CH	
634	"	"	"	"	"	OMe	N	
635	"	"	"	"	"	Me	N	
636	"	"	"	"	"	"	CH	
637	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
638	"	"	"	"	Me	Me	CH	
639	"	"	"	"	"	"	N	
640	"	"	"	"	Cl	OMe	CH	
641	"	"	"	Me	OMe	OMe	CH	
642	"	"	"	"	"	Me	N	
643	"	"	CO ₂ -Et	H	OMe	OMe	CH	
644	"	"	"	"	"	Cl	CH	
645	"	"	"	"	Me	Me	CH	
646	"	"	"	"	OMe	Me	N	
647	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
648	"	"	"	Me	OMe	OMe	CH	
649	"	"	"	"	OMe	Me	N	
650	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
651	"	"	"	"	"	"	N	
652	"	"	"	"	OMe	Me	N	
653	"	"	"	"	Me	Me	CH	
654	"	"	"	"	OMe	Cl	CH	
655	"	"	"	Me	Me	OMe	N	
656	"	"	"	"	OMe	OMe	CH	
657	Me	COCHMeEt	CO ₂ -i-Pr	H	OMe	OMe	CH	
658	"	"	"	"	"	"	N	
659	"	"	"	"	OMe	Me	N	
660	"	"	"	"	OMe	Cl	CH	
661	"	"	"	"	Me	Me	CH	
662	"	"	"	"	SMe	NEt ₂	N	
663	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
664	"	"	"	"	OMe	OMe	CH	
665	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	

TABLE 1-continued



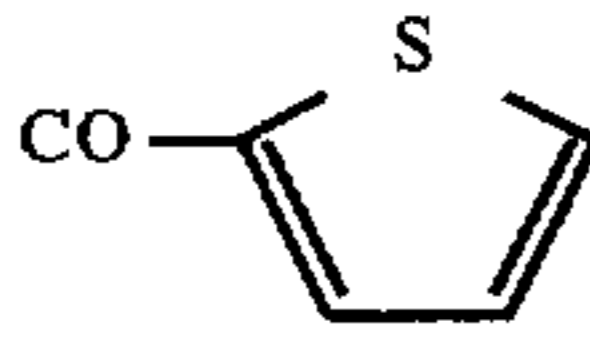
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
666	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
667	"	"	"	H	OMe	Me	N	
668	"	"	"	"	Me	Me	CH	
669	"	"	"	"	Cl	OMe	CH	
670	"	"	"	Me	OMe	OMe	CH	
671	"	"	"	"	OMe	Me	N	
672	"	"	CO ₂ -Et	H	OMe	OMe	CH	
673	"	"	"	"	OMe	Me	CH	
674	"	"	"	"	Cl	OMe	CH	
675	"	"	"	"	OMe	Me	N	
676	"	"	"	Me	OMe	OMe	CH	
677	"	"	"	"	"	Me	N	
678	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
679	"	"	"	"	OMe	Me	N	
680	"	"	"	"	OMe	Cl	CH	
681	"	"	"	"	Me	Me	CH	
682	"	"	"	Me	OMe	OMe	CH	
683	"	"	"	"	OMe	Me	N	
684	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
685	"	"	"	"	OMe	Me	N	
686	"	"	"	"	Me	Me	CH	
687	"	"	"	Me	OMe	Me	N	
688	n-Pr	CO-CHMeEt	CO ₂ -Me	H	OMe	OMe	CH	
689	"	"	"	"	"	Cl	CH	
690	"	"	"	"	Me	Me	CH	
691	"	"	"	"	OMe	Me	N	
692	"	"	"	Me	OMe	OMe	CH	
693	"	"	"	"	OMe	Me	N	
694	n-Pr	"	CO ₂ -Et	H	"	"	N	
695	"	"	"	"	"	OMe	CH	
696	"	"	"	"	Me	Me	CH	
697	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
698	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
699	"	"	"	"	OMe	Me	N	
700	"	"	"	"	Me	Me	CH	
701	"	"	"	"	Cl	OMe	N	
702	"	"	"	Me	OMe	Me	N	
703	"	"	"	"	"	OMe	CH	
704	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
705	"	"	"	"	"	Cl	CH	
706	"	"	"	"	Me	Me	CH	
707	"	"	"	"	OMe	Me	N	
708	"	"	CO ₂ -Et	H	OMe	OMe	CH	
709	"	"	CO ₂ -n-Pr	"	"	"	CH	
710	"	"	CO ₂ -i-Pr	"	"	"	CH	
711	Me		CO ₂ -Me	H	OMe	OMe	CH	
712	"	"	"	"	OMe	OMe	N	
713	"	"	"	"	"	Me	N	
714	"	"	"	"	"	"	CH	
715	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
716	"	"	"	"	Me	Me	CH	
717	"	"	"	"	"	"	N	
718	"	"	"	"	Cl	OMe	CH	
719	"	"	"	Me	OMe	OMe	CH	
720	"	"	"	"	"	Me	N	
721	"	"	CO ₂ -Et	H	OMe	OMe	CH	
722	"	"	"	"	"	Cl	CH	
723	"	"	"	"	Me	Me	CH	
724	"	"	"	"	OMe	Me	N	
725	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
726	"	"	"	Me	OMe	OMe	CH	
727	"	"	"	"	OMe	Me	N	
728	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	

TABLE 1-continued

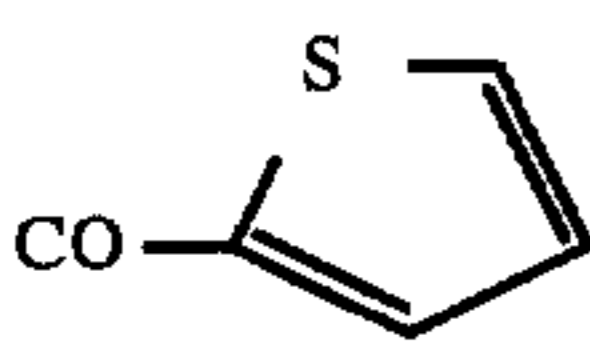
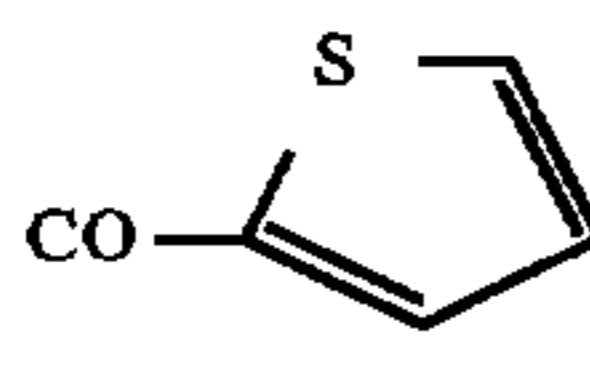
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
729	"	"	"	"	"	"	N	
730	"	"	"	"	OMe	Me	N	
731	"	"	"	"	Me	Me	CH	
732	"	"	"	"	OMe	Cl	CH	
733	"	"	"	Me	Me	OMe	N	
734	"	"	"	"	OMe	OMe	CH	
735	Me		CO ₂ -i-Pr	H	OMe	OMe	CH	
736	"	"	"	"	"	"	N	
737	"	"	"	"	OMe	Me	N	
738	"	"	"	"	OMe	Cl	CH	
739	"	"	"	"	Me	Me	CH	
740	"	"	"	"	SMe	NEt ₂	N	
741	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
742	"	"	"	"	OMe	OMe	CH	
743	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
744	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
745	"	"	"	H	OMe	Me	N	
746	"	"	"	"	Me	Me	CH	
747	"	"	"	"	Cl	OMe	CH	
748	"	"	"	Me	OMe	OMe	CH	
749	"	"	"	"	OMe	Me	N	
750	"	"	CO ₂ -Et	H	OMe	OMe	CH	
751	"	"	"	"	OMe	Me	CH	
752	"	"	"	"	Cl	OMe	CH	
753	"	"	"	"	OMe	Me	N	
754	"	"	"	Me	OMe	OMe	CH	
755	"	"	"	"	"	Me	N	
756	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
757	"	"	"	"	OMe	Me	N	
758	"	"	"	"	OMe	Cl	CH	
759	"	"	"	"	Me	Me	CH	
760	"	"	"	Me	OMe	OMe	CH	
761	"	"	"	"	OMe	Me	N	
762	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
763	"	"	"	"	OMe	Me	N	
764	"	"	"	"	Me	Me	CH	
765	"	"	"	Me	OMe	Me	N	
766	n-Pr		CO ₂ -Me	H	OMe	OMe	CH	
767	"	"	"	"	"	Cl	CH	
768	"	"	"	"	Me	Me	CH	
769	"	"	"	"	OMe	Me	N	
770	"	"	"	Me	OMe	OMe	CH	
771	"	"	"	"	OMe	Me	N	
772	n-Pr	"	CO ₂ -Et	H	OMe	OMe	N	
773	"	"	"	"	"	OMe	CH	
774	"	"	"	"	Me	Me	CH	
775	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
776	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
777	"	"	"	"	OMe	Me	N	
778	"	"	"	"	Me	Me	CH	
779	"	"	"	"	Cl	OMe	N	
780	"	"	"	Me	OMe	Me	N	
781	"	"	"	"	"	OMe	CH	
782	Allyl	"	CO ₂ Me	H	OMe	OMe	CH	
783	"	"	"	"	"	Cl	CH	
784	"	"	"	"	Me	Me	CH	
785	"	"	"	"	OMe	Me	N	
786	"	"	CO ₂ -Et	H	OMe	OMe	CH	

TABLE 1-continued

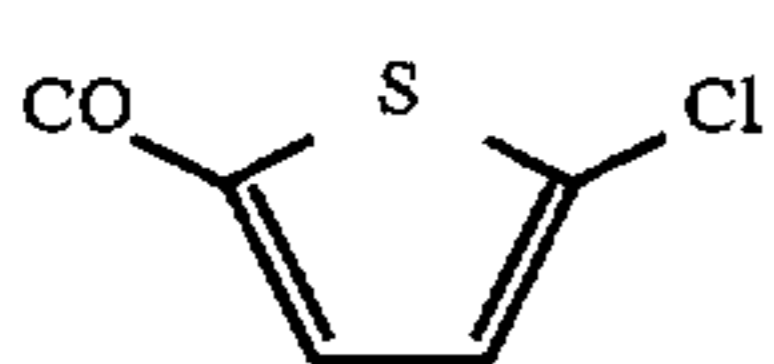
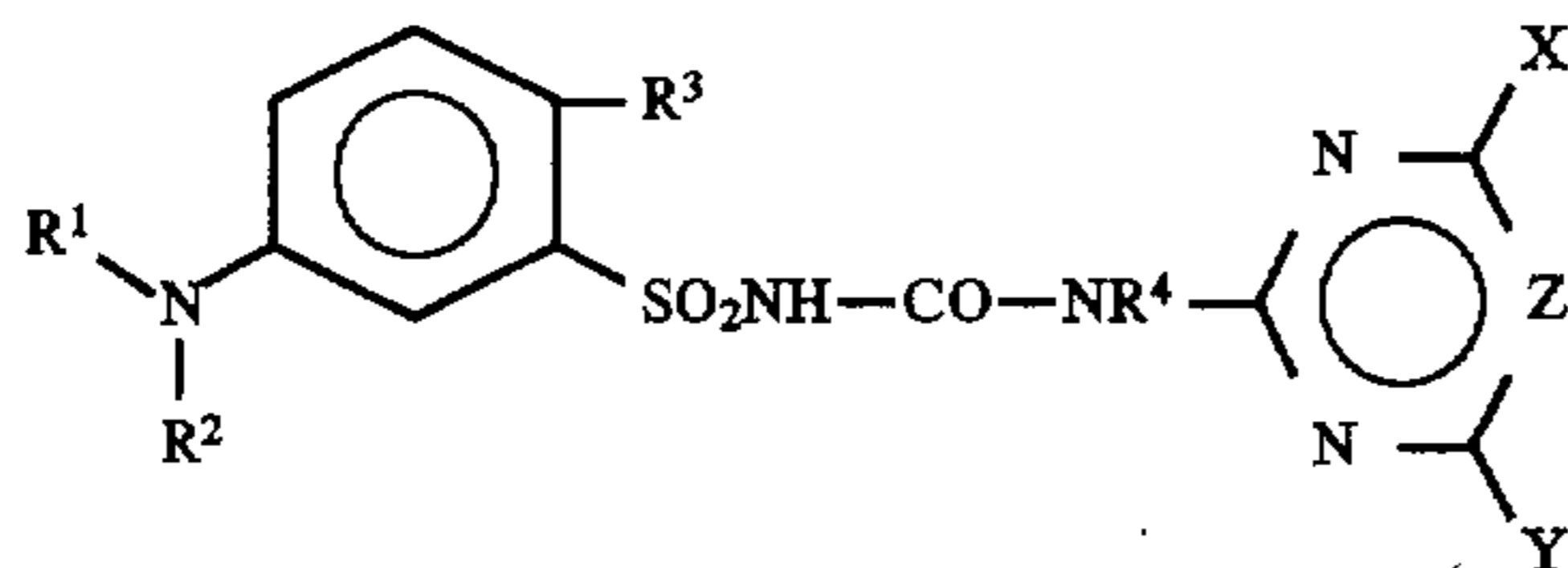
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
787	"	"	CO ₂ -n-Pr	"	"	"	"	"
788	"	"	CO ₂ -i-Pr	"	"	"	"	"
789	Me		CO ₂ Me	H	OMe	OMe	CH	
790	"	"	"	"	"	OMe	N	
791	"	"	"	"	"	Me	N	
792	"	"	"	"	"	"	CH	
793	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
794	"	"	"	"	Me	Me	CH	
795	"	"	"	"	"	"	N	
796	"	"	"	"	Cl	OMe	CH	
797	"	"	"	Me	OMe	OMe	CH	
798	"	"	"	"	"	Me	N	
799	"	"	CO ₂ -Et	H	OMe	OMe	CH	
800	"	"	"	"	"	Cl	CH	
801	"	"	"	"	Me	Me	CH	
802	"	"	"	"	OMe	Me	N	
803	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
804	"	"	"	Me	OMe	OMe	CH	
805	"	"	"	"	OMe	Me	N	
806	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
807	"	"	"	"	"	"	N	
808	"	"	"	"	OMe	Me	N	
809	"	"	"	"	Me	Me	CH	
810	"	"	"	"	OMe	Cl	CH	
811	"	"	"	Me	Me	OMe	N	
812	"	"	"	"	OMe	OMe	CH	
813	Me	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
814	"	"	"	"	"	"	N	
815	"	"	"	"	OMe	Me	N	
816	"	"	"	"	OMe	Cl	CH	
817	"	"	"	"	Me	Me	CH	
818	"	"	"	"	SMe	NEt ₂	N	
819	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
820	"	"	"	"	OMe	OMe	CH	
821	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
822	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
823	"	"	"	H	OMe	Me	N	
824	"	"	"	"	Me	Me	CH	
825	"	"	"	"	Cl	OMe	CH	
826	"	"	"	Me	OMe	OMe	CH	
827	"	"	"	"	OMe	Me	N	
828	"	"	CO ₂ -Et	H	OMe	OMe	CH	
829	"	"	"	"	OMe	Me	CH	
830	"	"	"	"	Cl	OMe	CH	
831	"	"	"	"	OMe	Me	N	
832	"	"	"	Me	OMe	OMe	CH	
833	"	"	"	"	"	Me	N	
834	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
835	"	"	"	"	OMe	Me	N	
836	"	"	"	"	OMe	Cl	CH	
837	"	"	"	"	Me	Me	CH	
838	"	"	"	Me	OMe	OMe	CH	
839	"	"	"	"	OMe	Me	N	
840	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
841	"	"	"	"	OMe	Me	N	
842	"	"	"	"	Me	Me	CH	
843	"	"	"	Me	OMe	Me	N	
844	n-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
845	"	"	"	"	"	Cl	CH	
846	"	"	"	"	Me	Me	CH	
847	"	"	"	"	OMe	Me	N	
848	"	"	"	Me	OMe	OMe	CH	
849	"	"	"	"	OMe	Me	N	

TABLE 1-continued



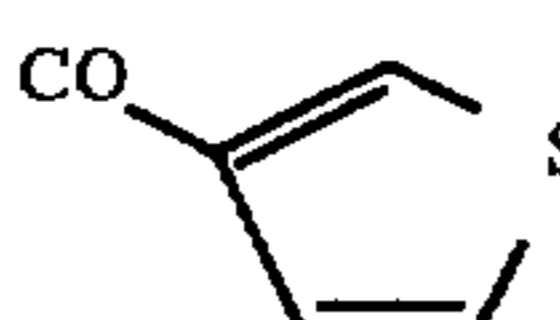
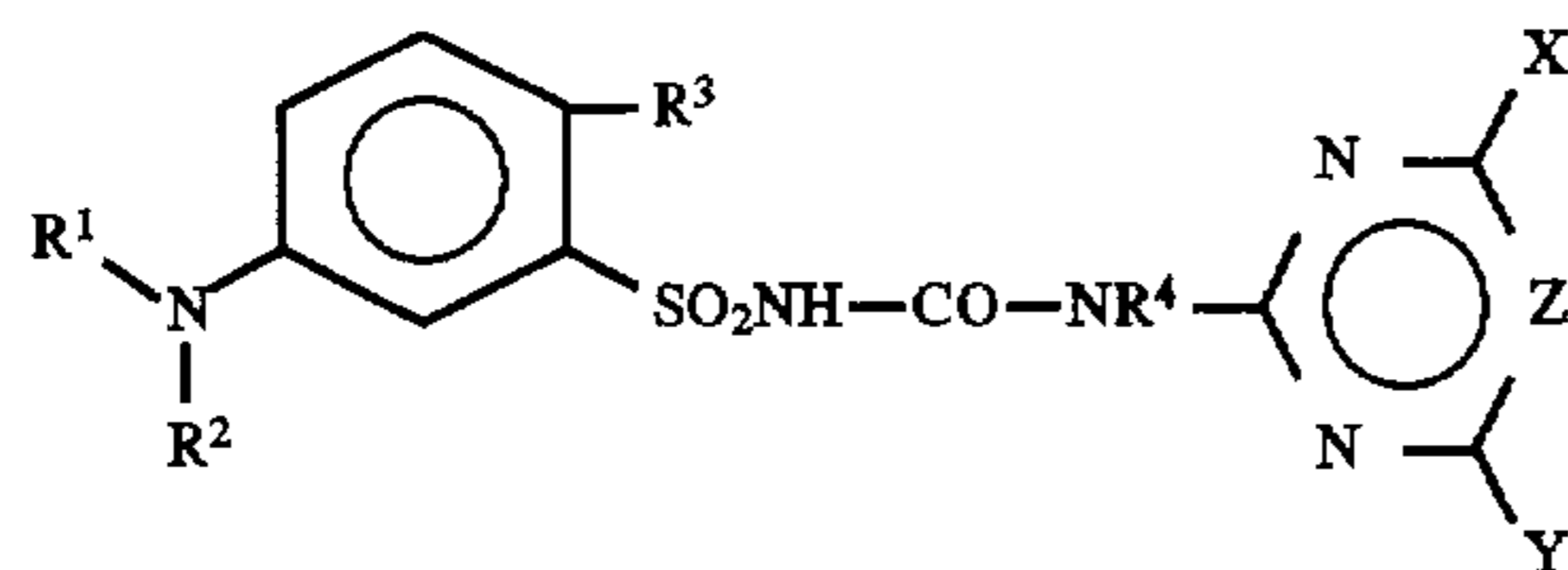
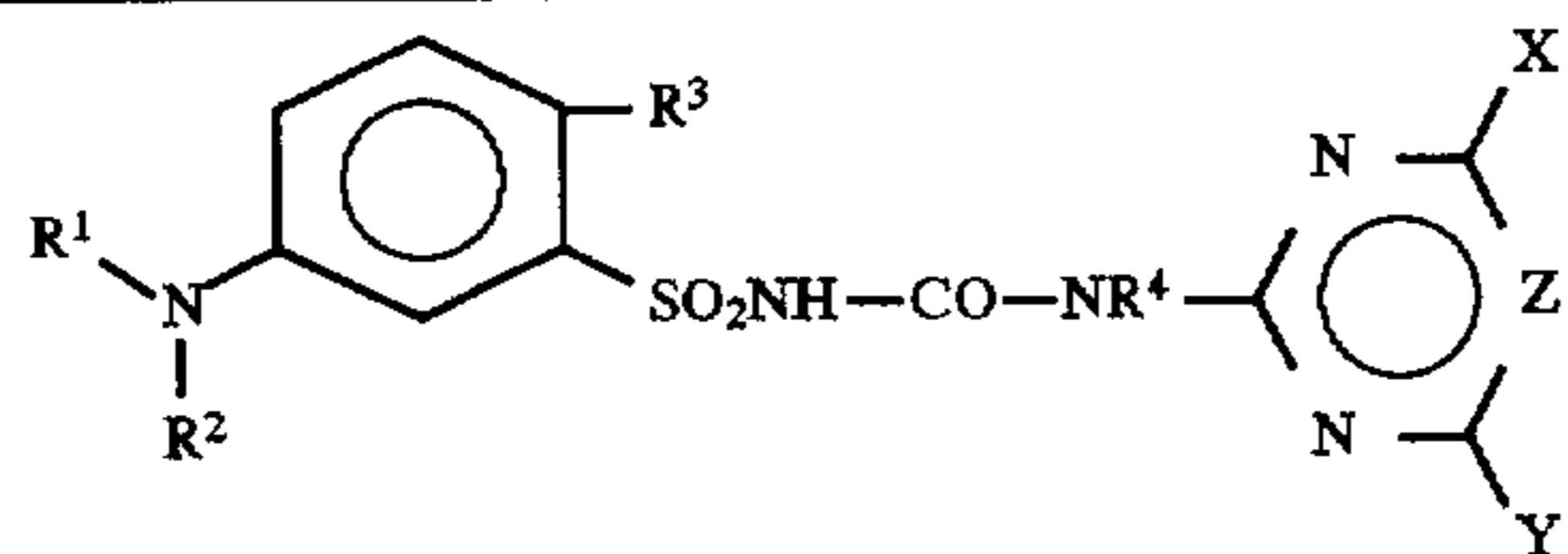
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
850	n-Pr	"	CO ₂ -Et	H	"	"	N	
851	"	"	"	"	"	OMe	CH	
852	"	"	"	"	Me	Me	CH	
853	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
854	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
855	"	"	"	"	OMe	Me	N	
856	"	"	"	"	Me	Me	CH	
857	"	"	"	"	Cl	OMe	N	
858	"	"	"	Me	OMe	Me	N	
859	"	"	"	"	"	OMe	CH	
860	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
861	"	"	"	"	"	Cl	CH	
862	"	"	"	"	Me	Me	CH	
863	"	"	"	"	OMe	Me	N	
864	"	"	CO ₂ -Et	H	OMe	OMe	CH	
865	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
866	"	"	CO ₂ -i-Pr	"	"	"	CH	
867	Me		CO ₂ -Me	H	OMe	OMe	CH	
868	"	"	"	"	"	OMe	N	
869	"	"	"	"	"	Me	N	
870	"	"	"	"	"	"	CH	
871	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
872	"	"	"	"	Me	Me	CH	
873	"	"	"	"	"	Cl	N	
874	"	"	"	"	Cl	OMe	CH	
875	"	"	"	Me	OMe	OMe	CH	
876	"	"	"	"	"	Me	N	
877	"	"	CO ₂ -Et	H	OMe	OMe	CH	
878	"	"	"	"	"	Cl	CH	
879	"	"	"	"	Me	Me	CH	
880	"	"	"	"	OMe	Me	N	
881	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
882	"	"	"	Me	OMe	OMe	CH	
883	"	"	"	"	OMe	Me	N	
884	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
885	"	"	"	"	"	"	N	
886	"	"	"	"	OMe	Me	N	
887	"	"	"	"	Me	Me	CH	
888	"	"	"	"	OMe	Cl	CH	
889	"	"	"	Me	Me	OMe	N	
890	"	"	"	"	OMe	OMe	CH	
891	Me	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
892	"	"	"	"	"	"	N	
893	"	"	"	"	H	Me	N	
894	"	"	"	"	OMe	Cl	CH	
895	"	"	"	"	Me	Me	CH	
896	"	"	"	"	SMe	NEt ₂	N	
897	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
898	"	"	"	"	OMe	OMe	CH	
899	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
900	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
901	"	"	"	H	OMe	Me	N	
902	"	"	"	"	Me	Me	CH	
903	"	"	"	"	Cl	OMe	CH	
904	"	"	"	Me	OMe	OMe	CH	
905	"	"	"	"	OMe	Me	N	
906	"	"	CO ₂ -Et	H	OMe	OMe	CH	
907	"	"	"	"	OMe	Me	CH	
908	"	"	"	"	Cl	OMe	CH	
909	"	"	"	"	OMe	Me	N	
910	"	"	"	Me	OMe	OMe	CH	
911	"	"	"	"	"	Me	N	
912	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	

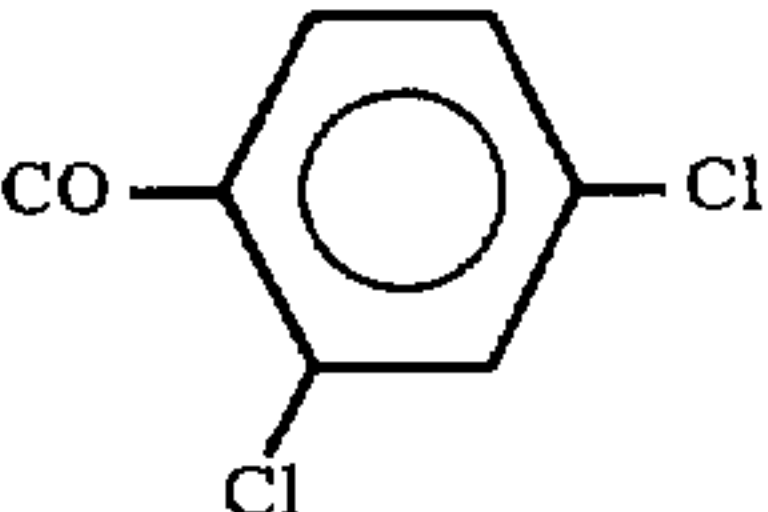
TABLE 1-continued



No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
971	"	"	"	"	H	Me	N	
972	"	"	"	"	OMe	Cl	CH	
973	"	"	"	"	Me	Me	CH	
974	"	"	"	"	SMe	NEt ₂	N	
975	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
976	"	"	"	"	OMe	OMe	CH	
977	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
978	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
979	"	"	"	H	OMe	Me	N	
980	"	"	"	"	Me	Me	CH	
981	"	"	"	"	Cl	OMe	CH	
982	"	"	"	Me	OMe	OMe	CH	
983	"	"	"	"	OMe	Me	N	
984	"	"	CO ₂ -Et	H	OMe	OMe	CH	
985	"	"	"	"	OMe	Me	CH	
986	"	"	"	"	Cl	OMe	CH	
987	"	"	"	"	OMe	Me	N	
988	"	"	"	Me	OMe	OMe	CH	
989	"	"	"	"	"	Me	N	
990	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
991	"	"	"	"	OMe	Me	N	
992	"	"	"	"	OMe	Cl	CH	
993	"	"	"	"	Me	Me	CH	
994	"	"	"	Me	OMe	OMe	CH	
995	"	"	"	"	OMe	Me	N	
996	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
997	"	"	"	"	OMe	Me	N	
998	"	"	"	"	Me	Me	CH	
999	"	"	"	Me	OMe	Me	N	
1.000	n-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.001	"	"	"	"	"	Cl	CH	
1.002	"	"	"	"	Me	Me	CH	
1.003	"	"	"	"	OMe	Me	N	
1.004	"	"	"	Me	OMe	OMe	CH	
1.005	"	"	"	"	OMe	Me	N	
1.006	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.007	"	"	"	"	Cl	OMe	CH	
1.008	"	"	"	"	Me	Me	CH	
1.009	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.010	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.011	"	"	"	"	OMe	Me	N	
1.012	"	"	"	"	Me	Me	CH	
1.013	"	"	"	"	Cl	OMe	N	
1.014	"	"	"	Me	OMe	Me	N	
1.015	"	"	"	"	"	OMe	CH	
1.016	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.017	"	"	"	"	"	Cl	CH	
1.018	"	"	"	"	Me	Me	CH	
1.019	"	"	"	"	OMe	Me	N	
1.020	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.021	"	"	CO ₂ -n-Pr	"	"	"	CH	
1.022	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.023	Me	CO-Ph	CO ₂ -Me	H	OMe	OMe	CH	177-183
1.024	"	"	"	"	"	OMe	N	
1.025	"	"	"	"	"	Me	N	
1.026	"	"	"	"	OMe	"	CH	
1.027	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.028	"	"	"	"	Me	Me	CH	
1.029	"	"	"	"	"	"	N	
1.030	"	"	"	"	Cl	OMe	CH	
1.031	"	"	"	Me	OMe	OMe	CH	
1.032	"	"	"	"	"	Me	N	
1.033	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.034	"	"	"	"	"	Cl	CH	
1.035	"	"	"	"	Me	Me	CH	
1.036	"	"	"	"	OMe	Me	N	
1.037	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.038	"	"	"	Me	OMe	OMe	CH	

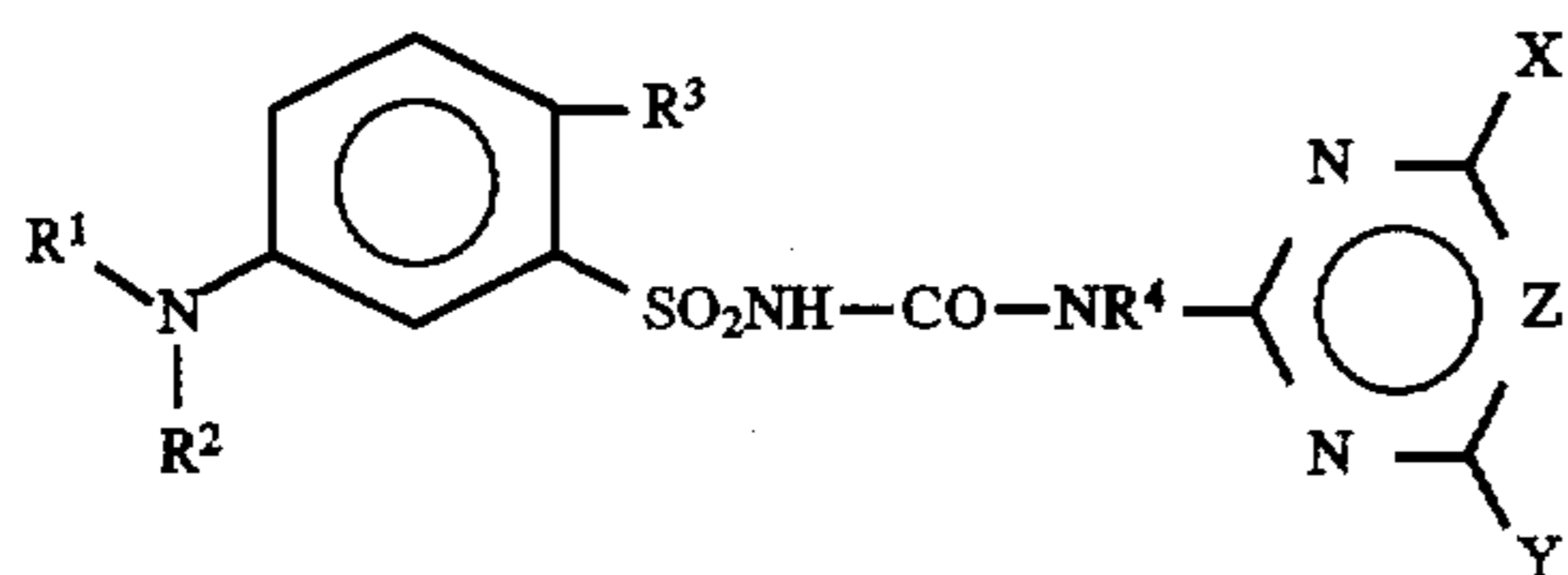
TABLE 1-continued



No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.039	"	"	"	"	OMe	Me	N	
1.040	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.041	"	"	"	"	"	"	N	
1.042	"	"	"	"	OMe	Me	N	
1.043	"	"	"	"	Me	Me	CH	
1.044	"	"	"	"	OMe	Cl	CH	
1.045	"	"	"	Me	Me	OMe	N	
1.046	"	"	"	"	OMe	OMe	CH	
1.047	Me	CO-Ph	CO ₂ -i-Pr	OMe	OMe	OMe	CH	
1.048	"	"	"	"	"	"	N	
1.049	"	"	"	"	OMe	Me	N	
1.050	"	"	"	"	OMe	Cl	CH	
1.051	"	"	"	"	Me	Me	CH	
1.052	"	"	"	"	SMe	NEt ₂	N	
1.053	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.054	"	"	"	"	OMe	OMe	CH	
1.055	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.056	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.057	"	"	"	H	OMe	Me	N	
1.058	"	"	"	"	Me	Me	CH	
1.059	"	"	"	"	Cl	OMe	CH	
1.060	"	"	"	Me	OMe	OMe	CH	
1.061	"	"	"	"	OMe	Me	N	
1.062	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.063	"	"	"	"	OMe	Me	CH	
1.064	"	"	"	"	Cl	OMe	CH	
1.065	"	"	"	"	OMe	Me	N	
1.066	"	"	"	Me	OMe	OMe	CH	
1.067	"	"	"	"	"	Me	N	
1.068	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.069	"	"	"	"	OMe	Me	N	
1.070	"	"	"	"	OMe	Cl	CH	
1.071	"	"	"	"	Me	Me	CH	
1.072	"	"	"	Me	OMe	OMe	CH	
1.073	"	"	"	"	OMe	Me	N	
1.074	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.075	"	"	"	"	OMe	Me	N	
1.076	"	"	"	Me	OMe	Me	N	
1.077	n-Pr	CO-Ph	CO ₂ -Me	H	OMe	OMe	CH	
1.078	"	"	"	"	"	Cl	CH	
1.079	"	"	"	"	Me	Me	CH	
1.080	"	"	"	"	OMe	Me	N	
1.081	"	"	"	Me	OMe	OMe	CH	
1.082	"	"	"	"	OMe	Me	N	
1.083	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.084	"	"	"	"	"	OMe	CH	
1.085	"	"	"	"	Me	Me	CH	
1.086	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.087	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.088	"	"	"	"	OMe	Me	N	
1.089	"	"	"	"	Me	Me	CH	
1.090	"	"	"	"	Cl	OMe	N	
1.091	"	"	"	Me	OMe	Me	N	
1.092	"	"	"	"	"	OMe	CH	
1.093	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.094	"	"	"	"	"	Cl	CH	
1.095	"	"	"	"	Me	Me	CH	
1.096	"	"	"	"	OMe	Me	N	
1.097	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.098	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.099	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.100	Me		CO ₂ -Me	H	OMe	OMe	CH	

1.101 " " " " " OMe N

TABLE 1-continued

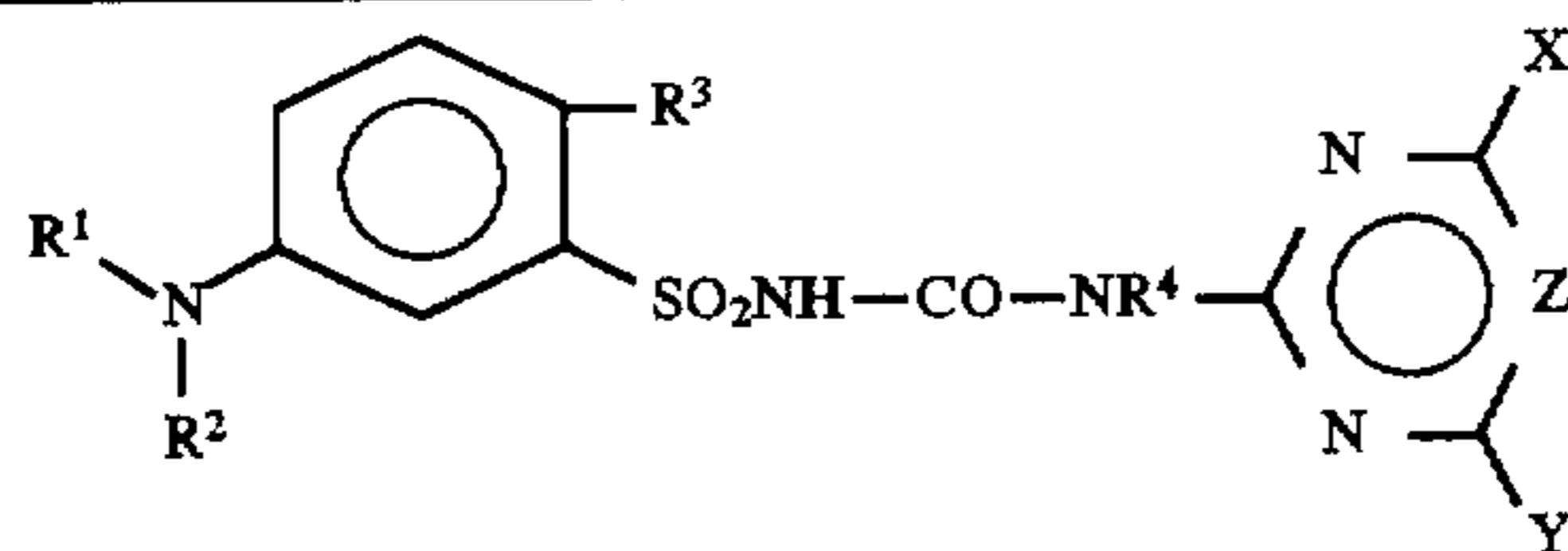


No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.102	"	"	"	"	"	Me	N	
1.103	"	"	"	"	"	"	CH	
1.104	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.105	"	"	"	"	Me	Me	CH	
1.106	"	"	"	"	"	"	N	
1.107	"	"	"	"	Cl	OMe	CH	
1.108	"	"	"	Me	OMe	OMe	CH	
1.109	"	"	"	"	"	Me	N	
1.110	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.111	"	"	"	"	"	Cl	CH	
1.112	"	"	"	"	Me	Me	CH	
1.113	"	"	"	"	OMe	Me	N	
1.114	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.115	"	"	"	Me	OMe	OMe	CH	
1.116	"	"	"	"	OMe	Me	N	
1.117	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.118	"	"	"	"	"	"	N	
1.119	"	"	"	"	OMe	Me	N	
1.120	"	"	"	"	Me	Me	CH	
1.121	"	"	"	"	OMe	Cl	CH	
1.122	"	"	"	Me	Me	OMe	N	
1.123	"	"	"	"	OMe	OMe	CH	
1.124	Me	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.125	"	"	"	"	"	"	N	
1.126	"	"	"	"	H	Me	N	
1.127	"	"	"	"	OMe	Cl	CH	
1.128	"	"	"	"	Me	Me	CH	
1.129	"	"	"	"	SMe	NEt ₂	N	
1.130	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.131	"	"	"	"	OMe	OMe	CH	
1.132	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.133	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.134	"	"	"	H	OMe	Me	N	
1.135	"	"	"	"	Me	Me	CH	
1.136	"	"	"	"	Cl	OMe	CH	
1.137	"	"	"	Me	OMe	OMe	CH	
1.138	"	"	"	"	OMe	Me	N	
1.139	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.140	"	"	"	"	OMe	Me	CH	
1.141	"	"	"	"	Cl	OMe	CH	
1.142	"	"	"	"	OMe	Me	N	
1.143	"	"	"	Me	OMe	OMe	CH	
1.144	"	"	"	"	"	Me	N	
1.145	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.146	"	"	"	"	OMe	Me	N	
1.147	"	"	"	"	OMe	Cl	CH	
1.148	"	"	"	"	Me	Me	CH	
1.149	"	"	"	Me	OMe	OMe	CH	
1.150	"	"	"	Me	OMe	Me	N	
1.151	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.152	"	"	"	"	OMe	Me	N	
1.153	"	"	"	"	Me	Me	CH	
1.154	"	"	"	Me	OMe	Me	N	
1.155	n-Pr		CO ₂ -Me	H	OMe	OMe	CH	

Chemical structure diagram of a benzene ring with a CO group at the 1-position and Cl atoms at the 3 and 5 positions.

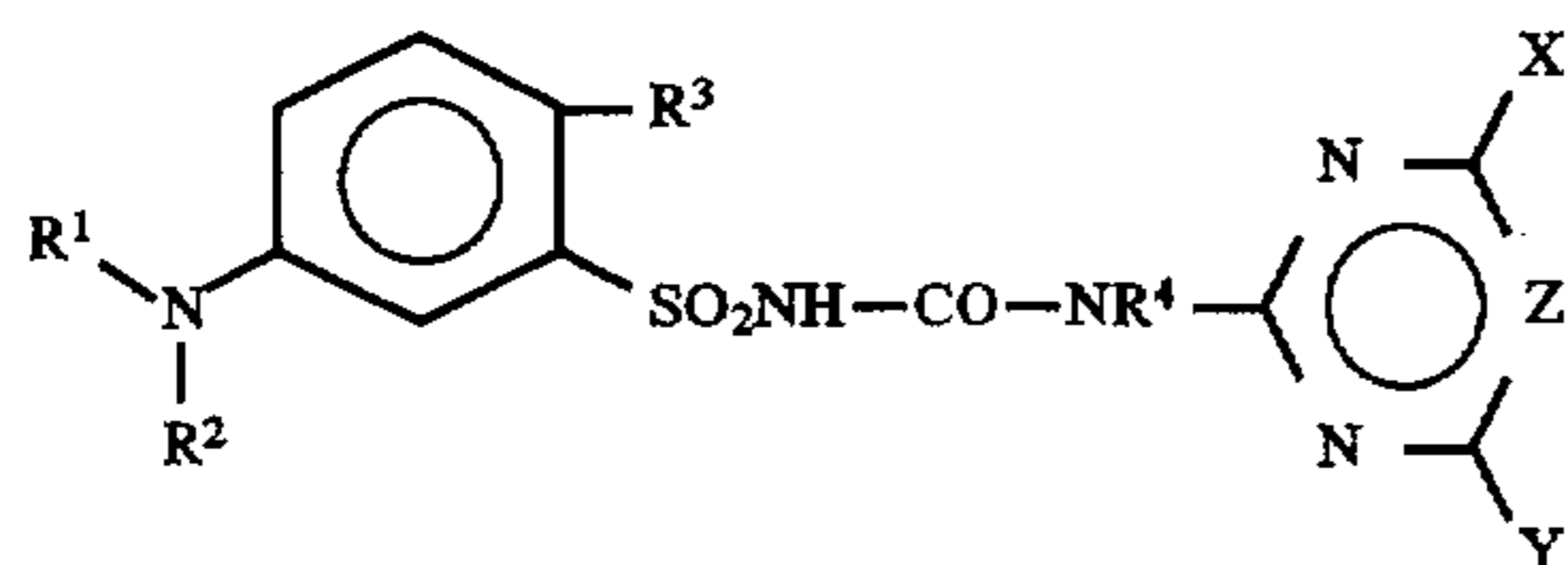
1.156	"	"	"	"	"	Cl	CH	
1.157	"	"	"	"	Me	Me	CH	
1.158	"	"	"	"	OMe	Me	N	
1.159	"	"	"	Me	OMe	OMe	CH	
1.160	"	"	"	"	OMe	Me	N	
1.161	n-Pr	"	CO ₂ -Et	H	OMe	Me	N	
1.162	"	"	"	"	"	OMe	CH	

TABLE 1-continued



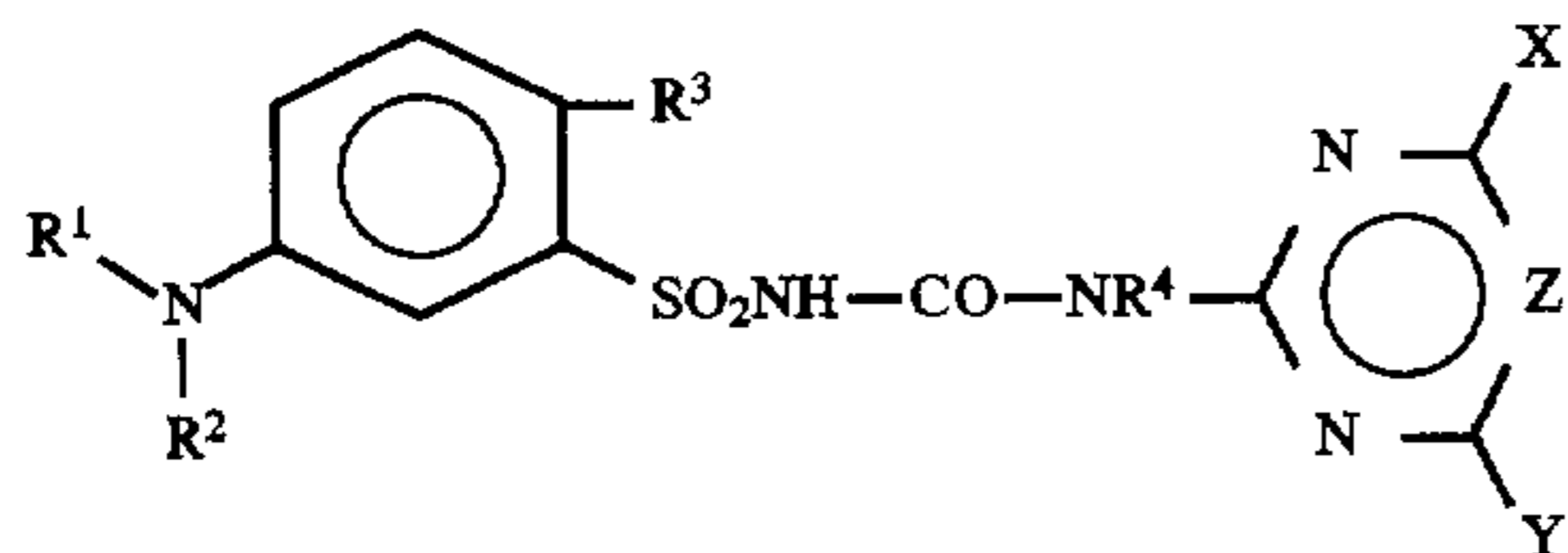
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.163	"	"	"	"	Me	Me	CH	
1.164	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.165	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.166	"	"	"	"	OMe	Me	N	
1.167	"	"	"	"	Me	Me	CH	
1.168	"	"	"	"	Cl	OMe	N	
1.169	"	"	"	Me	OMe	Me	N	
1.170	"	"	"	"	"	OMe	CH	
1.171	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.172	"	"	"	"	"	Cl	CH	
1.173	"	"	"	"	Me	Me	CH	
1.174	"	"	"	"	OMe	Me	N	
1.175	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.176	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.177	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.178	Me	CO-OMe	CO ₂ -Me	H	OMe	OMe	CH	128° C.
1.179	"	"	"	"	"	OMe	N	
1.180	"	"	"	"	"	Me	N	s. Bsp. o)
1.181	"	"	"	"	"	"	CH	89-101
1.182	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.183	"	"	"	"	Me	Me	CH	s. Bsp. m)
1.184	"	"	"	"	"	"	N	
1.185	"	"	"	"	Cl	OMe	CH	s. Bsp. n)
1.186	"	"	"	Me	OMe	OMe	CH	150-154
1.187	"	"	"	"	"	Me	N	
1.188	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.189	"	"	"	"	"	Cl	CH	
1.190	"	"	"	"	Me	Me	CH	
1.191	"	"	"	"	OMe	Me	N	
1.192	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.193	"	"	"	Me	OMe	OMe	CH	
1.194	"	"	"	"	OMe	Me	N	
1.195	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.196	"	"	"	"	"	"	N	
1.197	"	"	"	"	OMe	Me	N	
1.198	"	"	"	"	Me	Me	CH	
1.199	"	"	"	"	OMe	Cl	CH	
1.200	"	"	"	Me	Me	OMe	N	
1.201	"	"	"	"	OMe	OMe	CH	
1.202	Me	CO-OMe	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.203	"	"	"	"	"	"	N	
1.204	"	"	"	"	OMe	Me	N	
1.205	"	"	"	"	OMe	Cl	CH	
1.206	"	"	"	"	Me	Me	CH	
1.207	"	"	"	"	SMe	NBt ₂	N	
1.208	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.209	"	"	"	"	OMe	OMe	CH	
1.210	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.211	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.212	"	"	"	H	OMe	Me	N	
1.213	"	"	"	"	Me	Me	CH	
1.214	"	"	"	"	Cl	OMe	CH	
1.215	"	"	"	Me	OMe	OMe	CH	
1.216	"	"	"	"	OMe	Me	N	
1.217	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.218	"	"	"	"	OMe	Me	CH	
1.219	"	"	"	"	Cl	OMe	CH	
1.220	"	"	"	"	OMe	Me	N	
1.221	"	"	"	Me	OMe	OMe	CH	
1.222	"	"	"	"	"	Me	N	
1.223	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.224	"	"	"	"	OMe	Me	N	
1.225	"	"	"	"	OMe	Cl	CH	
1.226	"	"	"	"	Me	Me	CH	
1.227	"	"	"	Me	OMe	OMe	CH	
1.228	"	"	"	"	OMe	Me	N	
1.229	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.230	"	"	"	"	OMe	Me	N	

TABLE 1-continued



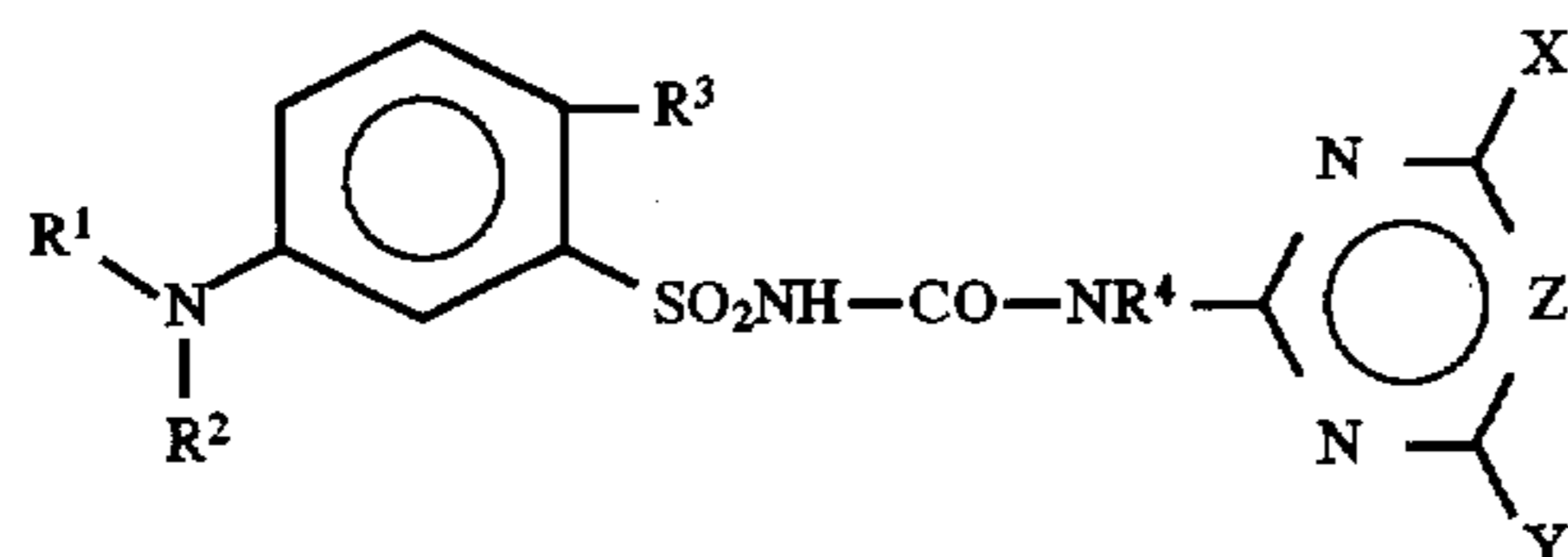
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.231	"	"	"	"	Me	Me	CH	
1.232	"	"	"	Me	OMe	Me	N	
1.233	n-Pr	CO-O-Me	CO ₂ -Me	H	OMe	OMe	CH	
1.234	"	"	"	"	"	Cl	CH	
1.235	"	"	"	"	Me	Me	CH	
1.236	"	"	"	"	OMe	Me	N	
1.237	"	"	"	Me	OMe	OMe	CH	
1.238	"	"	"	"	OMe	Me	N	
1.239	n-Pr	"	CO ₂ -Et	H	OMe	Me	N	
1.240	"	"	"	"	"	OMe	CH	
1.241	"	"	"	"	Me	Me	CH	
1.242	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.243	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.244	"	"	"	"	OMe	Me	N	
1.245	"	"	"	"	Me	Me	CH	
1.246	"	"	"	"	Cl	OMe	N	
1.247	"	"	"	Me	OMe	Me	N	
1.248	"	"	"	"	"	OMe	CH	
1.249	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.250	"	"	"	"	"	Cl	CH	
1.251	"	"	"	"	Me	Me	CH	
1.252	"	"	"	"	OMe	Me	N	
1.253	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.254	"	"	CO ₂ -n-Pr	"	"	"	"	
1.255	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.256	Me	CO-OEt	CO ₂ -Me	H	OMe	OMe	CH	90-94
1.257	"	"	"	"	"	OMe	N	
1.258	"	"	"	"	"	Me	N	
1.259	"	"	"	"	"	"	CH	
1.260	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.261	"	"	"	"	Me	Me	CH	
1.262	"	"	"	"	"	"	N	
1.263	"	"	"	"	Cl	OMe	CH	
1.264	"	"	"	Me	OMe	OMe	CH	
1.265	"	"	"	"	"	Me	N	
1.266	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.267	"	"	"	"	"	Cl	CH	
1.268	"	"	"	"	Me	Me	CH	
1.269	"	"	"	"	OMe	Me	N	
1.270	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.271	"	"	"	Me	OMe	OMe	CH	
1.272	"	"	"	"	OMe	Me	N	
1.273	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.274	"	"	"	"	"	"	N	
1.275	"	"	"	"	OMe	Me	N	
1.276	"	"	"	"	Me	Me	CH	
1.277	"	"	"	"	OMe	Cl	CH	
1.278	"	"	"	Me	Me	OMe	N	
1.279	"	"	"	"	OMe	OMe	CH	
1.280	Me	CO-OEt	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.281	"	"	"	"	"	"	N	
1.282	"	"	"	"	OMe	Me	N	
1.283	"	"	"	"	OMe	Cl	CH	
1.284	"	"	"	"	Me	Me	CH	
1.285	"	"	"	"	SMe	NEt ₂	N	
1.286	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.287	"	"	"	"	OMe	OMe	CH	
1.288	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.289	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.290	"	"	"	H	OMe	Me	N	
1.291	"	"	"	"	Me	Me	CH	
1.292	"	"	"	"	Cl	OMe	CH	
1.293	"	"	"	Me	OMe	OMe	CH	
1.294	"	"	"	"	OMe	Me	N	
1.295	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.296	"	"	"	"	OMe	Me	CH	
1.297	"	"	"	"	Cl	OMe	CH	
1.298	"	"	"	"	OMe	Me	N	

TABLE 1-continued



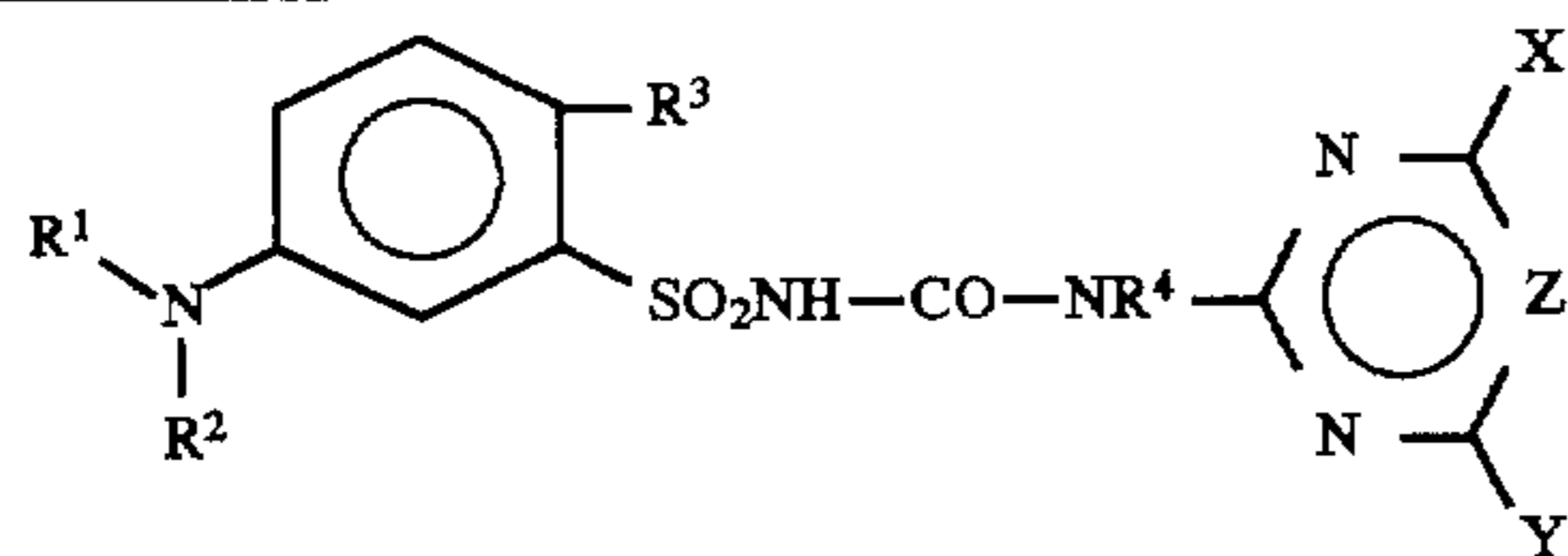
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.299	"	"	"	Me	OMe	OMe	CH	
1.300	"	"	"	"	"	Me	N	
1.301	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.302	"	"	"	"	OMe	Me	N	
1.303	"	"	"	"	OMe	Cl	CH	
1.304	"	"	"	"	Me	Me	CH	
1.305	"	"	"	Me	OMe	OMe	CH	
1.306	"	"	"	"	OMe	Me	N	
1.307	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.308	"	"	"	"	OMe	Me	N	
1.309	"	"	"	"	Me	Me	CH	
1.310	"	"	"	Me	OMe	Me	N	
1.311	n-Pr	CO-OEt	CO ₂ -Me	H	OMe	OMe	CH	
1.312	"	"	"	"	"	Cl	CH	
1.313	"	"	"	"	Me	Me	CH	
1.314	"	"	"	"	OMe	Me	N	
1.315	"	"	"	Me	OMe	OMe	CH	
1.316	"	"	"	"	OMe	Me	N	
1.317	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.318	"	"	"	"	"	OMe	CH	
1.319	"	"	"	"	Me	Me	CH	
1.320	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.321	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.322	"	"	"	"	OMe	Me	N	
1.323	"	"	"	"	Me	Me	CH	
1.324	"	"	"	"	Cl	OMe	N	
1.325	"	"	"	Me	OMe	Me	N	
1.326	"	"	"	"	"	OMe	CH	
1.327	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.328	"	"	"	"	"	Cl	CH	
1.329	"	"	"	"	Me	Me	CH	
1.330	"	"	"	"	OMe	Me	N	
1.331	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.332	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.333	"	"	CO ₂ -i-Pr	"	"	"	"	
1.334	Me	CO-O-i-Pr	CO ₂ -Me	H	OMe	OMe	CH	159-162
1.335	"	"	"	"	"	OMe	N	
1.336	"	"	"	"	"	Me	N	
1.337	"	"	"	"	"	"	CH	
1.338	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.339	"	"	"	"	Me	Me	CH	
1.340	"	"	"	"	"	"	N	
1.341	"	"	"	"	Cl	OMe	CH	
1.342	"	"	"	Me	OMe	OMe	CH	
1.343	"	"	"	"	"	Me	N	
1.344	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.345	"	"	"	"	"	Cl	CH	
1.346	"	"	"	"	Me	Me	CH	
1.347	"	"	"	"	OMe	Me	N	
1.348	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.349	"	"	"	Me	OMe	OMe	CH	
1.350	"	"	"	"	OMe	Me	N	
1.351	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.352	"	"	"	"	"	"	N	
1.353	"	"	"	"	OMe	Me	N	
1.354	"	"	"	"	Me	Me	CH	
1.355	"	"	"	"	OMe	Cl	CH	
1.356	"	"	"	Me	Me	OMe	N	
1.357	"	"	"	"	OMe	OMe	CH	
1.358	Me	CO-O-i-Pr	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.359	"	"	"	"	"	"	N	
1.360	"	"	"	"	H	Me	N	
1.361	"	"	"	"	OMe	Cl	CH	
1.362	"	"	"	"	Me	Me	CH	
1.363	"	"	"	"	SMe	NEt ₂	N	
1.364	"	"	CO ₂ -i-Pr	Me	OMe	N		
1.365	"	"	"	"	OMe	OMe	CH	
1.366	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	

TABLE 1-continued



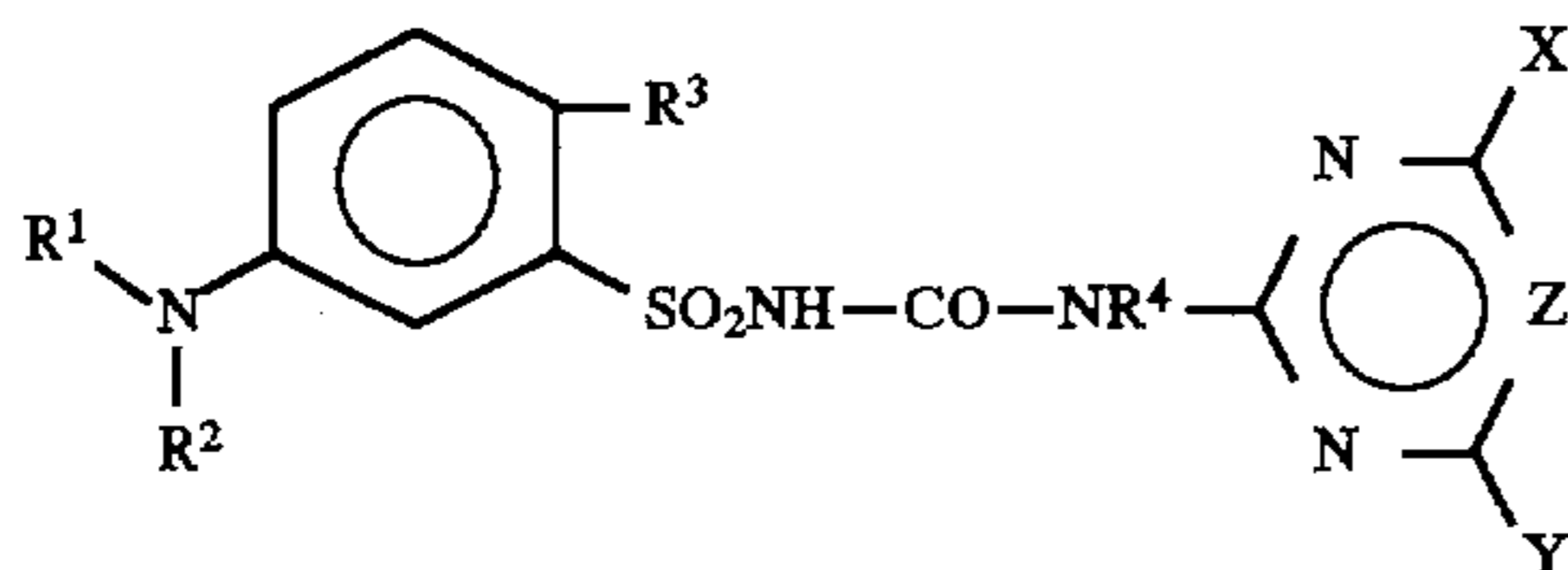
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.367	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.368	"	"	"	H	OMe	Me	N	
1.369	"	"	"	"	Me	Me	CH	
1.370	"	"	"	"	Cl	OMe	CH	
1.371	"	"	"	Me	OMe	OMe	CH	
1.372	"	"	"	"	OMe	Me	N	
1.373	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.374	"	"	"	"	OMe	Me	CH	
1.375	"	"	"	"	Cl	OMe	CH	
1.376	"	"	"	"	OMe	Me	N	
1.377	"	"	"	Me	OMe	OMe	CH	
1.378	"	"	"	"	"	Me	N	
1.379	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.380	"	"	"	"	OMe	Me	N	
1.381	"	"	"	"	OMe	Cl	CH	
1.382	"	"	"	"	Me	Me	CH	
1.383	"	"	"	Me	OMe	OMe	CH	
1.384	"	"	"	"	OMe	Me	N	
1.385	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.386	"	"	"	"	OMe	Me	N	
1.387	"	"	"	"	Me	Me	CH	
1.388	"	"	"	Me	OMe	Me	N	
1.389	n-Pr	CO-O-i-Pr	CO ₂ -Me	H	OMe	OMe	CH	
1.390	"	"	"	"	"	Cl	CH	
1.391	"	"	"	"	Me	Me	CH	
1.392	"	"	"	"	OMe	Me	N	
1.393	"	"	"	Me	OMe	OMe	CH	
1.394	"	"	"	"	OMe	Me	N	
1.395	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.396	"	"	"	"	"	OMe	CH	
1.397	"	"	"	"	Me	Me	CH	
1.398	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.399	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.400	"	"	"	"	OMe	Me	N	
1.401	"	"	"	"	Me	Me	CH	
1.402	"	"	"	"	Cl	OMe	N	
1.403	"	"	"	Me	OMe	Me	N	
1.404	"	"	"	"	"	OMe	CH	
1.405	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.406	"	"	"	"	"	Cl	CH	
1.407	"	"	"	"	Me	Me	CH	
1.408	"	"	"	"	OMe	Me	N	
1.409	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.410	"	"	CO ₂ -n-Pr	"	"	"	CH	
1.411	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.412	Me	CO-O-n-Pr	CO ₂ -Me	H	OMe	OMe	CH	
1.413	"	"	"	"	"	OMe	N	
1.414	"	"	"	"	"	Me	N	
1.415	"	"	"	"	"	"	CH	
1.416	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.417	"	"	"	"	Me	Me	CH	
1.418	"	"	"	"	"	"	N	
1.419	"	"	"	"	Cl	OMe	CH	
1.420	"	"	"	Me	OMe	OMe	CH	
1.421	"	"	"	"	"	Me	N	
1.422	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.423	"	"	"	"	"	Cl	CH	
1.424	"	"	"	"	Me	Me	CH	
1.425	"	"	"	"	OMe	Me	N	
1.426	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.427	"	"	"	Me	OMe	OMe	CH	
1.428	"	"	"	"	OMe	Me	N	
1.429	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.430	"	"	"	"	"	"	N	
1.431	"	"	"	"	OMe	Me	N	
1.432	"	"	"	"	Me	Me	CH	
1.433	"	"	"	"	OMe	Cl	CH	
1.434	"	"	"	Me	Me	OMe	N	

TABLE 1-continued



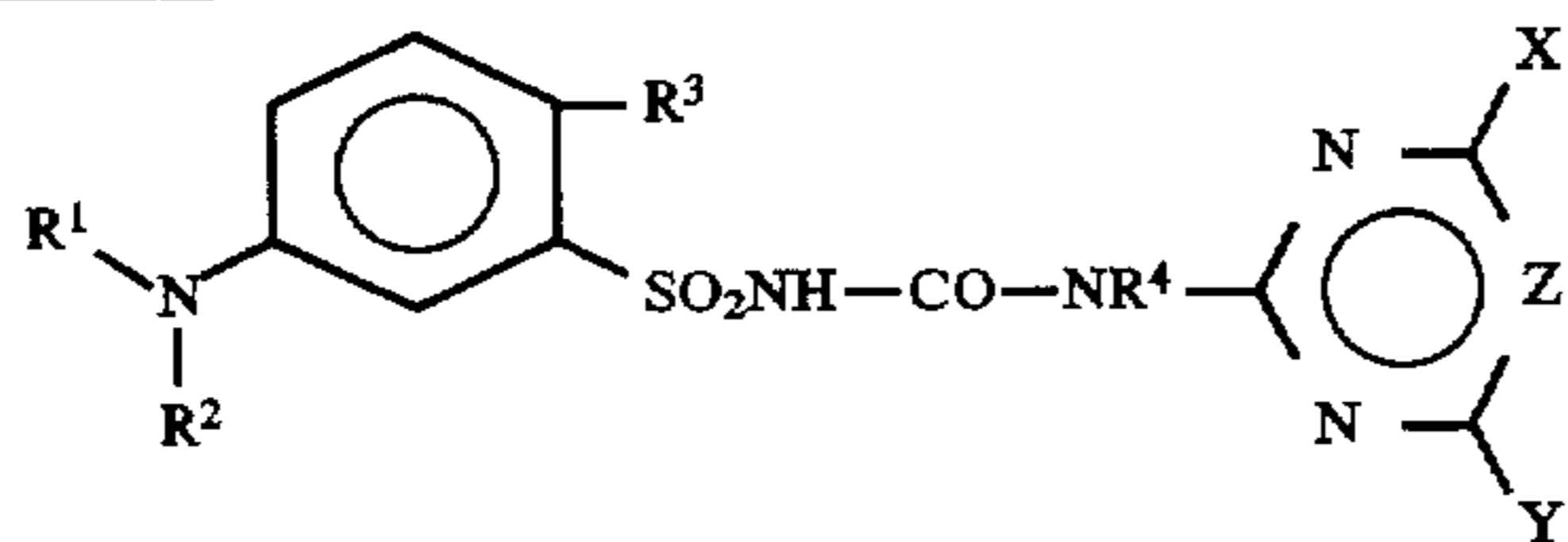
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.435	"	"	"	"	OMe	OMe	CH	
1.436	Me	CO-O-n-Pr	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.437	"	"	"	"	"	"	N	
1.438	"	"	"	"	OMe	Me	N	
1.439	"	"	"	"	OMe	Cl	CH	
1.440	"	"	"	"	Me	Me	CH	
1.441	"	"	"	"	SMe	NEt ₂	N	
1.442	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.443	"	"	"	"	OMe	OMe	CH	
1.444	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.445	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.446	"	"	"	H	OMe	Me	N	
1.447	"	"	"	"	Me	Me	CH	
1.448	"	"	"	"	Cl	OMe	CH	
1.449	"	"	"	Me	OMe	OMe	CH	
1.450	"	"	"	"	OMe	Me	N	
1.451	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.452	"	"	"	"	OMe	Me	CH	
1.453	"	"	"	"	Cl	OMe	CH	
1.454	"	"	"	"	OMe	Me	N	
1.455	"	"	"	Me	OMe	OMe	CH	
1.456	"	"	"	"	"	Me	N	
1.457	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.458	"	"	"	"	OMe	Me	N	
1.459	"	"	"	"	OMe	Cl	CH	
1.460	"	"	"	"	Me	Me	CH	
1.461	"	"	"	Me	OMe	OMe	CH	
1.462	"	"	"	"	OMe	Me	N	
1.463	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.464	"	"	"	"	OMe	Me	N	
1.465	"	"	"	"	Me	Me	CH	
1.466	"	"	"	Me	OMe	Me	N	
1.467	n-Pr	CO-O-n-Pr	CO ₂ -Me	H	OMe	OMe	CH	
1.468	"	"	"	"	"	Cl	CH	
1.469	"	"	"	"	Me	Me	CH	
1.470	"	"	"	"	OMe	Me	N	
1.471	"	"	"	Me	OMe	OMe	CH	
1.472	"	"	"	"	OMe	Me	N	
1.473	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.474	"	"	"	"	"	OMe	CH	
1.475	"	"	"	"	Me	Me	CH	
1.476	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.477	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.478	"	"	"	"	OMe	Me	N	
1.479	"	"	"	"	Me	Me	CH	
1.480	"	"	"	"	Cl	OMe	N	
1.481	"	"	"	Me	OMe	Me	N	
1.482	"	"	"	"	"	OMe	CH	
1.483	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.484	"	"	"	"	"	Cl	CH	
1.485	"	"	"	"	Me	Me	CH	
1.486	"	"	"	"	OMe	Me	N	
1.487	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.488	"	"	CO ₂ -n-Pr	"	"	"	CH	
1.489	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.490	Me	CO-O-allyl	CO ₂ -Me	H	OMe	OMe	CH	
1.491	"	"	"	"	"	OMe	N	
1.492	"	"	"	"	"	Me	N	
1.493	"	"	"	"	"	"	CH	
1.494	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.495	"	"	"	"	Me	Me	CH	
1.496	"	"	"	"	"	"	N	
1.497	"	"	"	"	Cl	OMe	CH	
1.498	"	"	"	Me	OMe	OMe	CH	
1.499	"	"	"	"	"	Me	N	
1.500	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.501	"	"	"	"	"	Cl	CH	
1.502	"	"	"	"	Me	Me	CH	

TABLE 1-continued



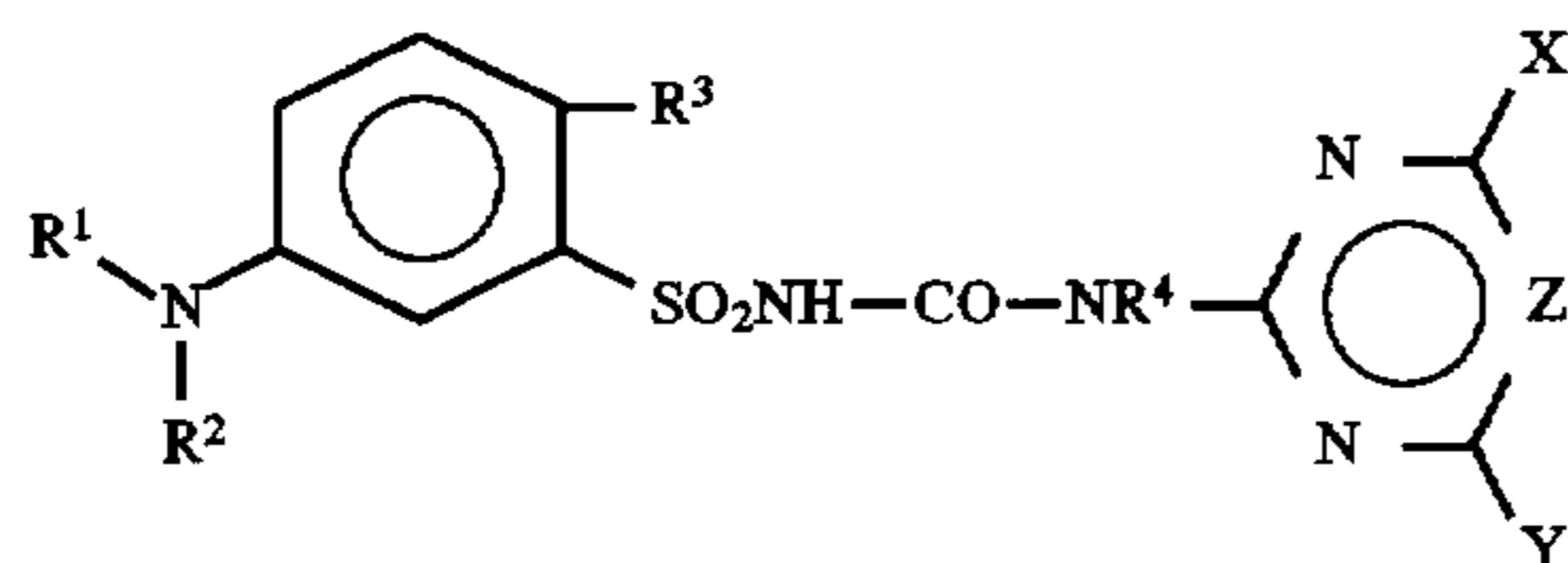
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.503	"	"	"	"	OMe	Me	N	
1.504	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.505	"	"	"	Me	OMe	OMe	CH	
1.506	"	"	"	"	OMe	Me	N	
1.507	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.508	"	"	"	"	"	"	N	
1.509	"	"	"	"	OMe	Me	N	
1.510	"	"	"	"	Me	Me	CH	
1.511	"	"	"	"	OMe	Cl	CH	
1.512	"	"	"	Me	Me	OMe	N	
1.513	"	"	"	"	OMe	OMe	CH	
1.514	Me	CO-O-allyl	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.515	"	"	"	"	"	"	N	
1.516	"	"	"	"	H	Me	N	
1.517	"	"	"	"	OMe	Cl	CH	
1.518	"	"	"	"	Me	Me	CH	
1.519	"	"	"	"	SMe	NEt ₂	N	
1.520	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.521	"	"	"	"	OMe	OMe	CH	
1.522	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.523	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.524	"	"	"	H	OMe	Me	N	
1.525	"	"	"	"	Me	Me	CH	
1.526	"	"	"	"	Cl	OMe	CH	
1.527	"	"	"	Me	OMe	OMe	CH	
1.528	"	"	"	"	OMe	Me	N	
1.529	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.530	"	"	"	"	OMe	Me	CH	
1.531	"	"	"	"	Cl	OMe	CH	
1.532	"	"	"	"	OMe	Me	N	
1.533	"	"	"	Me	OMe	OMe	CH	
1.534	"	"	"	"	"	Me	N	
1.535	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.536	"	"	"	"	OMe	Me	N	
1.537	"	"	"	"	OMe	Cl	CH	
1.538	"	"	"	"	Me	Me	CH	
1.539	"	"	"	Me	OMe	OMe	CH	
1.540	"	"	"	"	OMe	Me	N	
1.541	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.542	"	"	"	"	OMe	Me	N	
1.543	"	"	"	"	Me	Me	CH	
1.544	"	"	"	Me	OMe	Me	N	
1.545	n-Pr	CO-O-allyl	CO ₂ -Me	H	OMe	OMe	CH	
1.546	"	"	"	"	"	Cl	CH	
1.547	"	"	"	"	Me	Me	CH	
1.548	"	"	"	"	OMe	Me	N	
1.549	"	"	"	Me	OMe	OMe	CH	
1.550	"	"	"	"	OMe	Me	N	
1.551	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.552	"	"	"	"	"	OMe	CH	
1.553	"	"	"	"	Me	Me	CH	
1.554	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.555	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.556	"	"	"	"	OMe	Me	N	
1.557	"	"	"	"	Me	Me	CH	
1.558	"	"	"	"	Cl	OMe	N	
1.559	"	"	"	Me	OMe	Me	N	
1.560	"	"	"	"	"	OMe	CH	
1.561	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.562	"	"	"	"	"	Cl	CH	
1.563	"	"	"	"	Me	Me	CH	
1.564	"	"	"	"	OMe	Me	N	
1.565	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.566	"	"	CO ₂ -n-Pr	"	"	"	CH	
1.567	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.568	Me	CO-NH-Et	CO ₂ -Me	H	OMe	OMe	CH	
1.569	"	"	"	"	"	OMe	N	
1.570	"	"	"	"	"	Me	N	

TABLE 1-continued



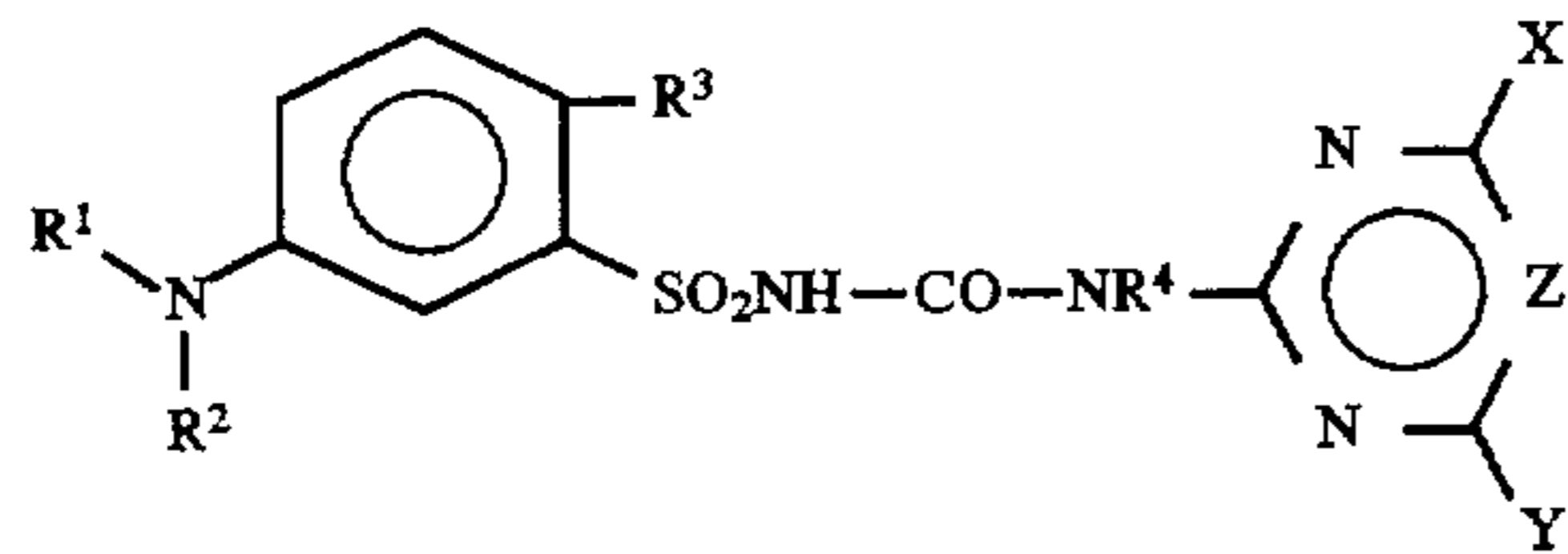
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.571	"	"	"	"	"	"	CH	
1.572	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.573	"	"	"	"	Me	Me	CH	
1.574	"	"	"	"	"	"	N	
1.575	"	"	"	"	Cl	OMe	CH	
1.576	"	"	"	Me	OMe	OMe	CH	
1.577	"	"	"	"	"	Me	N	
1.578	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.579	"	"	"	"	"	Cl	CH	
1.580	"	"	"	"	Me	Me	CH	
1.581	"	"	"	"	OMe	Me	N	
1.582	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.583	"	"	"	Me	OMe	OMe	CH	
1.584	"	"	"	"	OMe	Me	N	
1.585	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.586	"	"	"	"	"	"	N	
1.587	"	"	"	"	OMe	Me	N	
1.588	"	"	"	"	Me	Me	CH	
1.589	"	"	"	"	OMe	Cl	CH	
1.590	"	"	"	Me	Me	OMe	N	
1.591	"	"	"	"	OMe	OMe	CH	
1.592	Me	CO-NHEt	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.593	"	"	"	"	"	"	N	
1.594	"	"	"	"	OMe	Me	N	
1.595	"	"	"	"	OMe	Cl	CH	
1.596	"	"	"	"	Me	Me	CH	
1.597	"	"	"	"	SMe	NEt ₂	N	
1.598	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.599	"	"	"	"	OMe	OMe	CH	
1.600	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.601	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.602	"	"	"	H	OMe	Me	N	
1.603	"	"	"	"	Me	Me	CH	
1.604	"	"	"	"	Cl	OMe	CH	
1.605	"	"	"	Me	OMe	OMe	CH	
1.606	"	"	"	"	OMe	Me	N	
1.607	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.608	"	"	"	"	OMe	Me	CH	
1.609	"	"	"	"	Cl	OMe	CH	
1.610	"	"	"	"	OMe	Me	N	
1.611	"	"	"	Me	OMe	OMe	CH	
1.612	"	"	"	"	"	Me	N	
1.613	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.614	"	"	"	"	OMe	Me	N	
1.615	"	"	"	"	OMe	Cl	CH	
1.616	"	"	"	"	Me	Me	CH	
1.617	"	"	"	Me	OMe	OMe	CH	
1.618	"	"	"	"	OMe	Me	N	
1.619	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.620	"	"	"	"	OMe	Me	N	
1.621	"	"	"	"	Me	Me	CH	
1.622	"	"	"	Me	OMe	Me	N	
1.623	n-Pr	CO-NHEt	CO ₂ -Me	H	OMe	OMe	CH	
1.624	"	"	"	"	"	Cl	CH	
1.625	"	"	"	"	Me	Me	CH	
1.626	"	"	"	"	OMe	Me	N	
1.627	"	"	"	Me	OMe	OMe	CH	
1.628	"	"	"	"	OMe	Me	N	
1.629	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.630	"	"	"	"	"	OMe	CH	
1.631	"	"	"	"	Me	Me	CH	
1.632	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.633	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.634	"	"	"	"	OMe	Me	N	
1.635	"	"	"	"	Me	Me	CH	
1.636	"	"	"	"	Cl	OMe	N	
1.637	"	"	"	Me	OMe	Me	N	
1.638	"	"	"	"	"	OMe	CH	

TABLE 1-continued



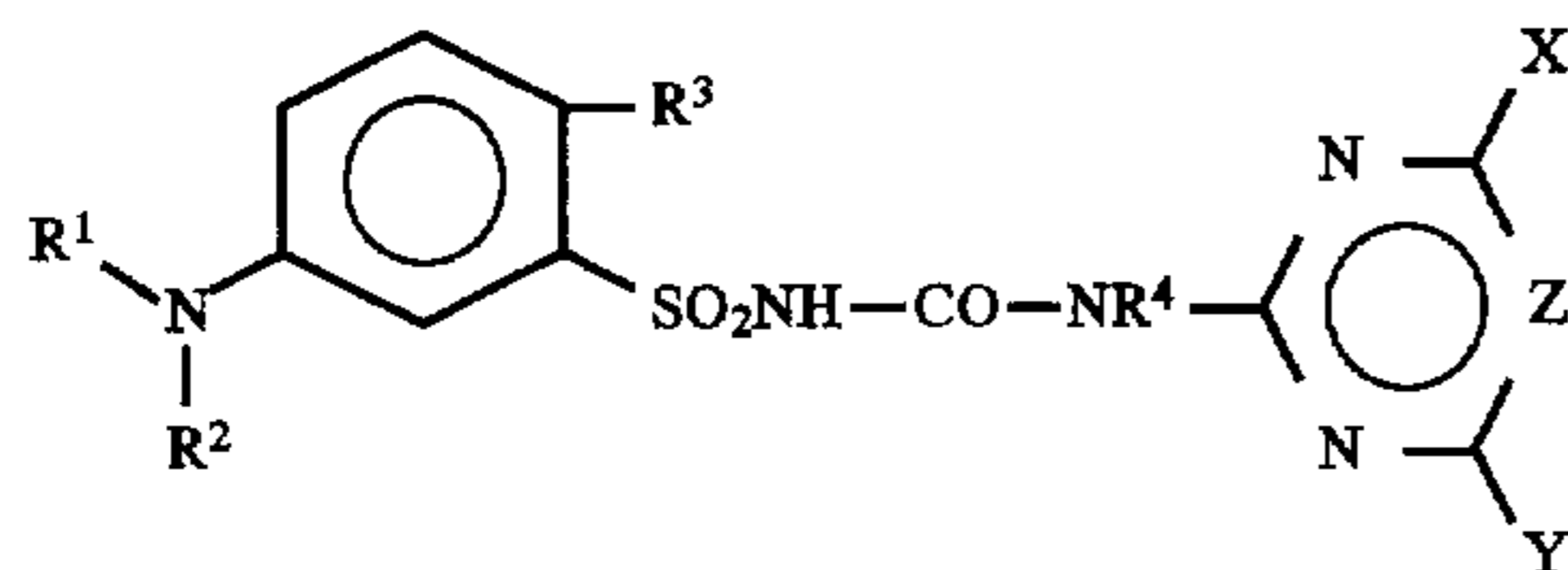
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.639	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.640	"	"	"	"	"	Cl	CH	
1.641	"	"	"	"	Me	Me	CH	
1.642	"	"	"	"	OMe	Me	N	
1.643	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.644	"	"	CO ₂ -n-Pr	"	"	"	CH	
1.645	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.646	Me	CO-NHPr	CO ₂ -Me	H	"	"	CH	
1.647	"	"	"	"	"	OMe	N	
1.648	"	"	"	"	"	Me	N	
1.649	"	"	"	"	"	"	CH	
1.650	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.651	"	"	"	"	Me	Me	CH	
1.652	"	"	"	"	"	"	N	
1.653	"	"	"	"	Cl	OMe	CH	
1.654	"	"	"	Me	OMe	OMe	CH	
1.655	"	"	"	"	"	Me	N	
1.656	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.657	"	"	"	"	"	Cl	CH	
1.658	"	"	"	"	Me	Me	CH	
1.659	"	"	"	"	OMe	Me	N	
1.660	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.661	"	"	"	Me	OMe	OMe	CH	
1.662	"	"	"	"	OMe	Me	N	
1.663	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.664	"	"	"	"	"	"	N	
1.665	"	"	"	"	OMe	Me	N	
1.666	"	"	"	"	Me	Me	CH	
1.667	"	"	"	"	OMe	Cl	CH	
1.668	"	"	"	Me	Me	OMe	N	
1.669	"	"	"	"	OMe	OMe	CH	
1.670	Me	CONHPr	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.671	"	"	"	"	"	"	N	
1.672	"	"	"	"	OMe	Me	N	
1.673	"	"	"	"	OMe	Cl	CH	
1.674	"	"	"	"	Me	Me	CH	
1.675	"	"	"	"	SMe	NEt ₂	N	
1.676	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.677	"	"	"	"	OMe	OMe	CH	
1.678	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.679	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.680	"	"	"	H	OMe	Me	N	
1.681	"	"	"	"	Me	Me	CH	
1.682	"	"	"	"	Cl	OMe	CH	
1.683	"	"	"	Me	OMe	OMe	CH	
1.684	"	"	"	"	OMe	Me	N	
1.685	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.686	"	"	"	"	OMe	Me	CH	
1.687	"	"	"	"	Cl	OMe	CH	
1.688	"	"	"	"	OMe	Me	N	
1.689	"	"	"	Me	OMe	OMe	CH	
1.690	"	"	"	"	"	Me	N	
1.691	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.692	"	"	"	"	OMe	Me	N	
1.693	"	"	"	"	OMe	Cl	CH	
1.694	"	"	"	"	Me	Me	CH	
1.695	"	"	"	Me	OMe	OMe	CH	
1.696	"	"	"	"	OMe	Me	N	
1.697	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.698	"	"	"	"	OMe	Me	N	
1.699	"	"	"	"	Me	Me	CH	
1.700	"	"	"	Me	OMe	Me	N	
1.701	n-Pr	"	CO ₂ Me	H	OMe	OMe	CH	
1.702	"	"	"	"	"	Cl	CH	
1.703	"	"	"	"	Me	Me	CH	
1.704	"	"	"	"	OMe	Me	N	
1.705	"	"	"	Me	OMe	OMe	CH	
1.706	"	"	"	"	OMe	Me	N	

TABLE 1-continued



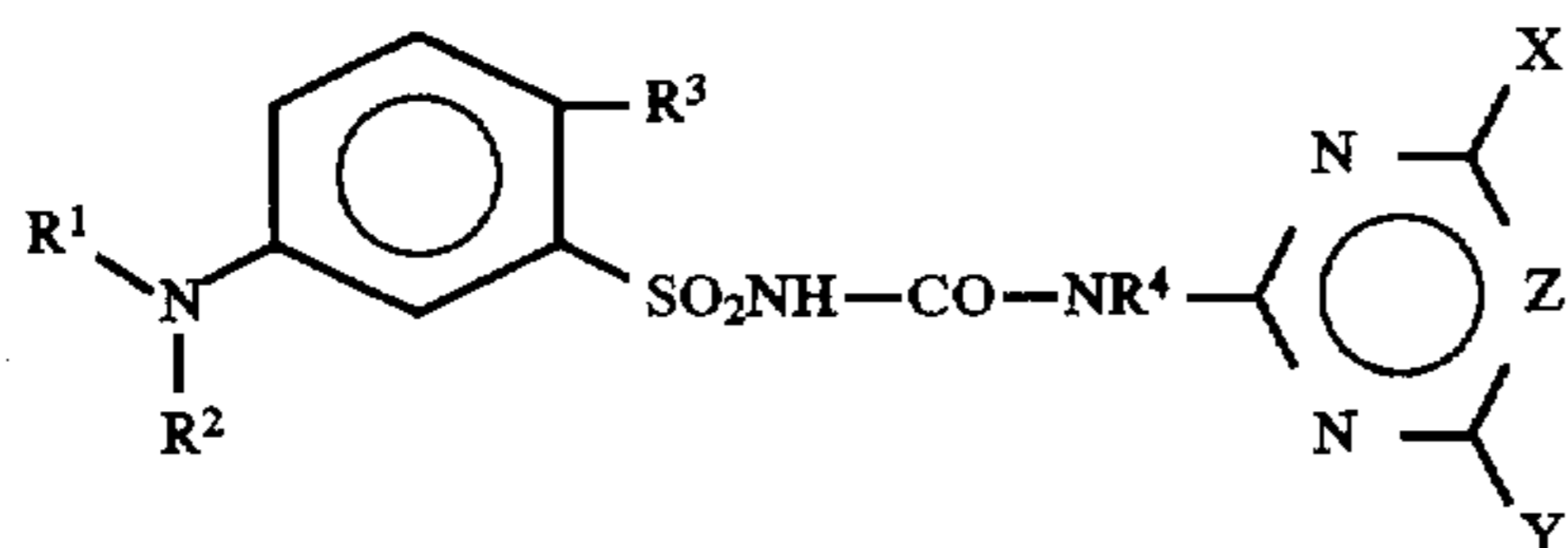
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.707	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.708	"	"	"	"	"	OMe	CH	
1.709	"	"	"	"	Me	Me	CH	
1.710	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.711	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.712	"	"	"	"	OMe	Me	N	
1.713	"	"	"	"	Me	Me	CH	
1.714	"	"	"	"	Cl	OMe	N	
1.715	"	"	"	Me	OMe	Me	N	
1.716	"	"	"	"	"	OMe	CH	
1.717	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.718	"	"	"	"	"	Cl	CH	
1.719	"	"	"	"	Me	Me	CH	
1.720	"	"	"	"	OMe	Me	N	
1.721	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.722	"	"	CO ₂ -n-Pr	"	"	"	CH	
1.723	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.724	Me	CONH-allyl	CO ₂ -Me	H	OMe	OMe	CH	
1.725	"	"	"	"	"	OMe	N	
1.726	"	"	"	"	"	Me	N	
1.727	"	"	"	"	"	"	CH	
1.728	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.729	"	"	"	"	Me	Me	CH	
1.730	"	"	"	"	"	"	N	
1.731	"	"	"	"	Cl	OMe	CH	
1.732	"	"	"	Me	OMe	OMe	CH	
1.733	"	"	"	"	"	Me	N	
1.734	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.735	"	"	"	"	"	Cl	CH	
1.736	"	"	"	"	Me	Me	CH	
1.737	"	"	"	"	OMe	Me	N	
1.738	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.739	"	"	"	Me	OMe	OMe	CH	
1.740	"	"	"	"	OMe	Me	N	
1.741	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.742	"	"	"	"	"	"	N	
1.743	"	"	"	"	OMe	Me	N	
1.744	"	"	"	"	Me	Me	CH	
1.745	"	"	"	"	OMe	Cl	CH	
1.746	"	"	"	Me	Me	OMe	N	
1.747	"	"	"	"	OMe	OMe	CH	
1.748	Me	CONH-allyl	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.749	"	"	"	"	"	"	N	
1.750	"	"	"	"	OMe	Me	N	
1.751	"	"	"	"	OMe	Cl	CH	
1.752	"	"	"	"	Me	Me	CH	
1.753	"	"	"	"	SMe	NEt ₂	N	
1.754	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.755	"	"	"	"	OMe	OMe	CH	
1.756	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.757	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.758	"	"	"	H	OMe	Me	N	
1.759	"	"	"	"	Me	Me	CH	
1.760	"	"	"	"	Cl	OMe	CH	
1.761	"	"	"	Me	OMe	OMe	CH	
1.762	"	"	"	"	OMe	Me	N	
1.763	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.764	"	"	"	"	OMe	Me	CH	
1.765	"	"	"	"	Cl	OMe	CH	
1.766	"	"	"	"	OMe	Me	N	
1.767	"	"	"	Me	OMe	OMe	CH	
1.768	"	"	"	"	"	Me	N	
1.769	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.770	"	"	"	"	OMe	Me	N	
1.771	"	"	"	"	OMe	Cl	CH	
1.772	"	"	"	"	Me	Me	CH	
1.773	"	"	"	Me	OMe	OMe	CH	
1.774	"	"	"	"	OMe	Me	N	

TABLE 1-continued



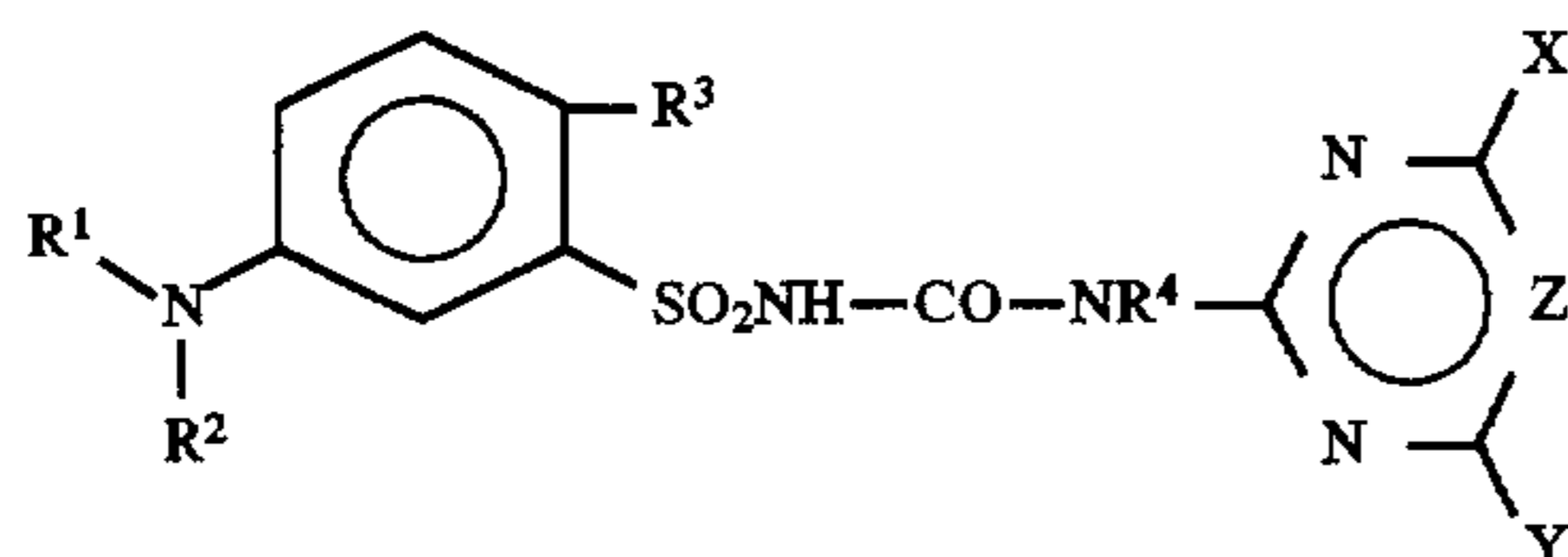
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.775	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.776	"	"	"	"	OMe	Me	N	
1.777	"	"	"	"	Me	Me	CH	
1.778	"	"	"	Me	OMe	Me	N	
1.779	n-Pr	CO-NH-allyl	CO ₂ -Me	H	OMe	OMe	CH	
1.780	"	"	"	"	"	Cl	CH	
1.781	"	"	"	"	Me	Me	CH	
1.782	"	"	"	"	OMe	Me	N	
1.783	"	"	"	Me	OMe	OMe	CH	
1.784	"	"	"	"	OMe	Me	N	
1.785	n-Pr	"	CO ₂ -Et	H	OMe	Me	N	
1.786	"	"	"	"	"	OMe	CH	
1.787	"	"	"	"	Me	Me	CH	
1.788	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.789	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.790	"	"	"	"	OMe	Me	N	
1.791	"	"	"	"	Me	Me	CH	
1.792	"	"	"	"	Cl	OMe	N	
1.793	"	"	"	Me	OMe	Me	N	
1.794	"	"	"	"	"	OMe	CH	
1.795	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.796	"	"	"	"	"	Cl	CH	
1.797	"	"	"	"	Me	Me	CH	
1.798	"	"	"	"	OMe	Me	N	
1.799	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.800	"	"	CO ₂ -n-Pr	"	"	"	"	
1.801	"	"	CO ₂ -i-Pr	"	"	"	"	
1.802	Me	CS-NHMe	CO ₂ -Me	H	OMe	OMe	CH	190-193
1.803	"	"	"	"	"	OMe	N	
1.804	"	"	"	"	"	Me	N	
1.805	"	"	"	"	"	"	CH	
1.806	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.807	"	"	"	"	Me	Me	CH	
1.808	"	"	"	"	"	"	N	
1.809	"	"	"	"	Cl	OMe	CH	
1.810	"	"	"	Me	OMe	OMe	CH	
1.811	"	"	"	"	"	Me	N	
1.812	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.813	"	"	"	"	"	Cl	CH	
1.814	"	"	"	"	Me	Me	CH	
1.815	"	"	"	"	OMe	Me	N	
1.816	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.817	"	"	"	Me	OMe	OMe	CH	
1.818	"	"	"	"	OMe	Me	N	
1.819	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.820	"	"	"	"	"	"	N	
1.821	"	"	"	"	OMe	Me	N	
1.822	"	"	"	"	Me	Me	CH	
1.823	"	"	"	"	OMe	Cl	CH	
1.824	"	"	"	Me	Me	OMe	N	
1.825	"	"	"	"	OMe	OMe	CH	
1.826	Me	CS-NHMe	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.827	"	"	"	"	"	"	N	
1.828	"	"	"	"	OMe	Me	N	
1.829	"	"	"	"	OMe	Cl	CH	
1.830	"	"	"	"	Me	Me	CH	
1.831	"	"	"	"	SMe	NEt ₂	N	
1.832	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.833	"	"	"	"	OMe	OMe	CH	
1.834	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.835	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.836	"	"	"	H	OMe	Me	N	
1.837	"	"	"	"	Me	Me	CH	
1.838	"	"	"	"	Cl	OMe	CH	
1.839	"	"	"	Me	OMe	OMe	CH	
1.840	"	"	"	"	OMe	Me	N	
1.841	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.842	"	"	"	"	OMe	Me	CH	

TABLE 1-continued



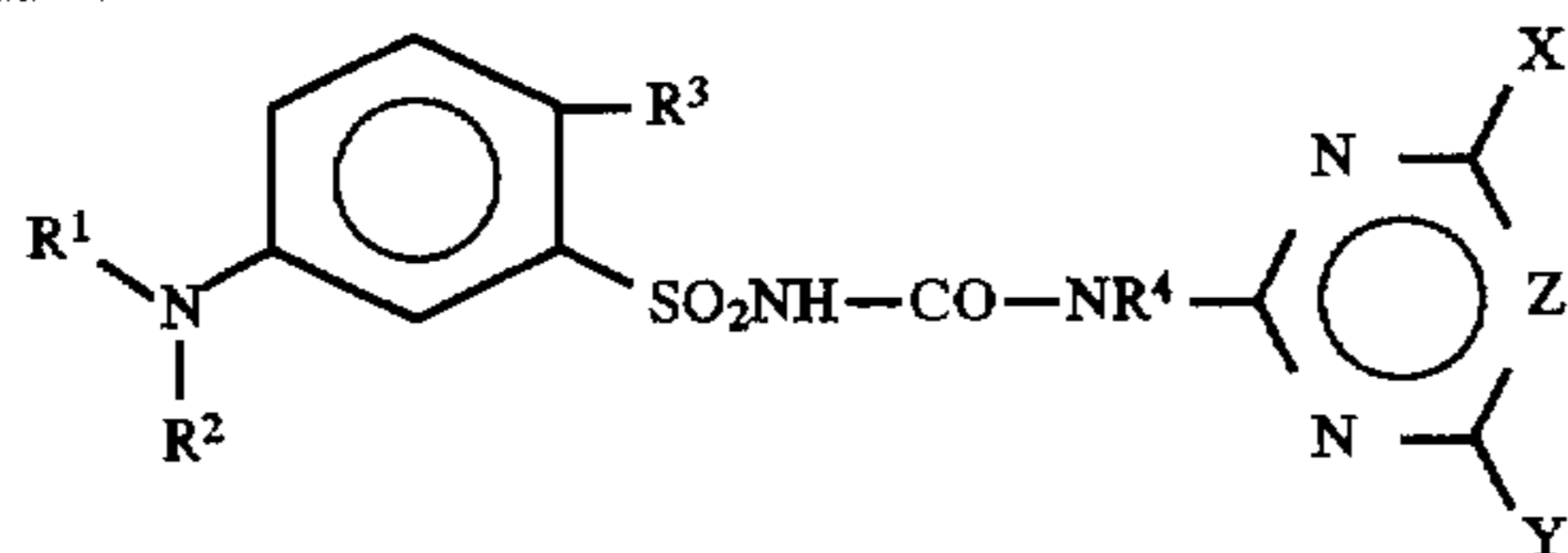
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.843	"	"	"	"	Cl	OMe	CH	
1.844	"	"	"	"	OMe	Me	N	
1.845	"	"	"	Me	OMe	OMe	CH	
1.846	"	"	"	"	"	Me	N	
1.847	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.848	"	"	"	"	OMe	Me	N	
1.849	"	"	"	"	OMe	Cl	CH	
1.850	"	"	"	"	Me	Me	CH	
1.851	"	"	"	Me	OMe	OMe	CH	
1.852	"	"	"	"	OMe	Me	N	
1.853	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.854	"	"	"	"	OMe	Me	N	
1.855	"	"	"	"	Me	Me	CH	
1.856	"	"	"	Me	OMe	Me	N	
1.857	n-Pr	CS-NHMe	CO ₂ -Me	H	OMe	OMe	CH	
1.858	"	"	"	"	"	Cl	CH	
1.859	"	"	"	"	Me	Me	CH	
1.860	"	"	"	"	OMe	Me	N	
1.861	"	"	"	Me	OMe	OMe	CH	
1.862	"	"	"	"	OMe	Me	N	
1.863	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.864	"	"	"	"	"	OMe	CH	
1.865	"	"	"	"	Me	Me	CH	
1.866	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.867	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.868	"	"	"	"	OMe	Me	N	
1.869	"	"	"	"	Me	Me	CH	
1.870	"	"	"	"	Cl	OMe	N	
1.871	"	"	"	Me	OMe	Me	N	
1.872	"	"	"	"	"	OMe	CH	
1.873	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.874	"	"	"	"	"	Cl	CH	
1.875	"	"	"	"	Me	Me	CH	
1.876	"	"	"	"	OMe	Me	N	
1.877	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.878	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.879	"	"	CO ₂ -i-Pr	"	"	"	"	
1.880	Me	CS-NHEt	CO ₂ -Me	H	OMe	OMe	CH	
1.881	"	"	"	"	"	OMe	N	
1.882	"	"	"	"	"	Me	N	
1.883	"	"	"	"	"	"	CH	
1.884	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.885	"	"	"	"	Me	Me	CH	
1.886	"	"	"	"	"	"	N	
1.887	"	"	"	"	Cl	OMe	CH	
1.888	"	"	"	Me	OMe	OMe	CH	
1.889	"	"	"	"	"	Me	N	
1.890	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.891	"	"	"	"	"	Cl	CH	
1.892	"	"	"	"	Me	Me	CH	
1.893	"	"	"	"	OMe	Me	N	
1.894	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.895	"	"	"	Me	OMe	OMe	CH	
1.896	"	"	"	"	OMe	Me	N	
1.897	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.898	"	"	"	"	"	"	N	
1.899	"	"	"	"	OMe	Me	N	
1.900	"	"	"	"	Me	Me	CH	
1.901	"	"	"	"	OMe	Cl	CH	
1.902	"	"	"	Me	Me	OMe	N	
1.903	"	"	"	"	OMe	OMe	CH	
1.904	Me	CS-NHEt	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.905	"	"	"	"	"	"	N	
1.906	"	"	"	"	OMe	Me	N	
1.907	"	"	"	"	OMe	Cl	CH	
1.908	"	"	"	"	Me	Me	CH	
1.909	"	"	"	"	SMe	NEt ₂	N	
1.910	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	

TABLE 1-continued



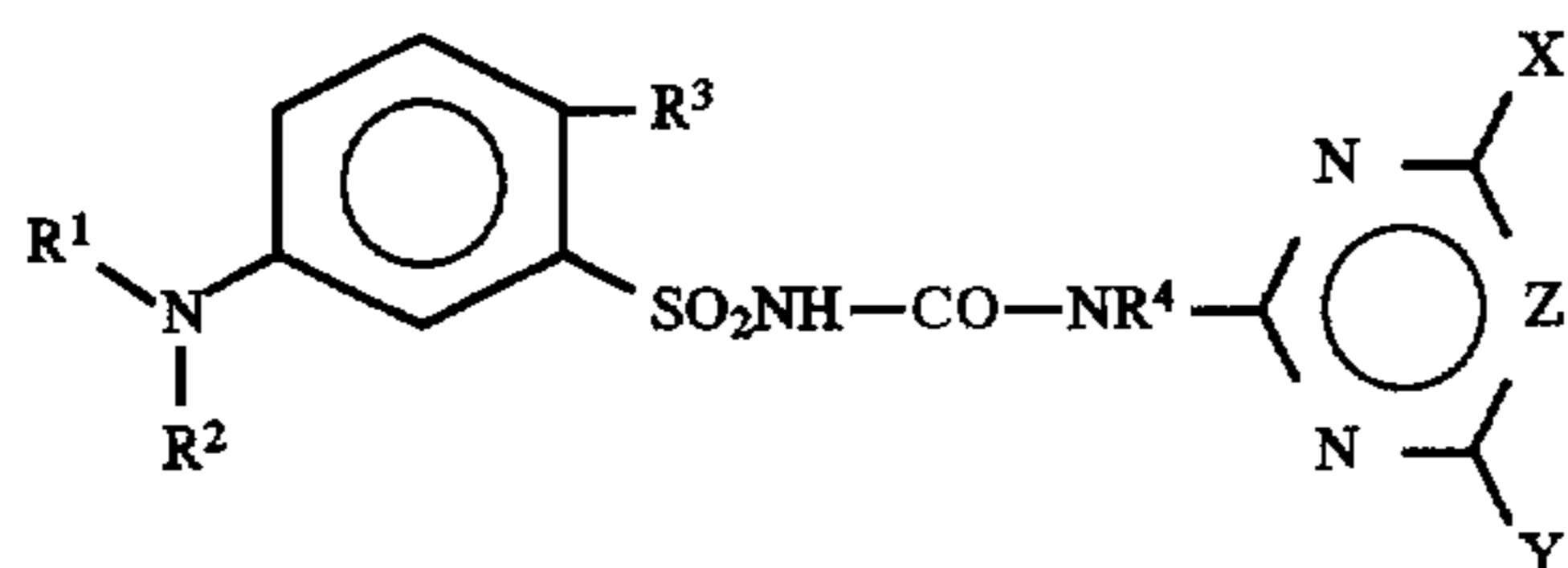
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.911	"	"	"	"	OMe	OMe	CH	
1.912	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.913	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.914	"	"	"	H	OMe	Me	N	
1.915	"	"	"	"	Me	Me	CH	
1.916	"	"	"	"	Cl	OMe	CH	
1.917	"	"	"	Me	OMe	OMe	CH	
1.918	"	"	"	"	OMe	Me	N	
1.919	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.920	"	"	"	"	"	Me	CH	
1.921	"	"	"	"	Cl	OMe	CH	
1.922	"	"	"	"	OMe	Me	N	
1.923	"	"	"	Me	OMe	OMe	CH	
1.924	"	"	"	"	"	Me	N	
1.925	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.926	"	"	"	"	OMe	Me	N	
1.927	"	"	"	"	OMe	Cl	CH	
1.928	"	"	"	"	Me	Me	CH	
1.929	"	"	"	Me	OMe	OMe	CH	
1.930	"	"	"	"	OMe	Me	N	
1.931	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.932	"	"	"	"	OMe	Me	N	
1.933	"	"	"	"	Me	Me	CH	
1.934	"	"	"	Me	OMe	Me	N	
1.935	n-Pr	CS-NHEt	CO ₂ -Me	H	OMe	OMe	CH	
1.936	"	"	"	"	"	Cl	CH	
1.937	"	"	"	"	Me	Me	CH	
1.938	"	"	"	"	OMe	Me	N	
1.939	"	"	"	Me	OMe	OMe	CH	
1.940	"	"	"	"	OMe	Me	N	
1.941	n-Pr	"	CO ₂ -Et	H	"	"	N	
1.942	"	"	"	"	"	OMe	CH	
1.943	"	"	"	"	Me	Me	CH	
1.944	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
1.945	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
1.946	"	"	"	"	OMe	Me	N	
1.947	"	"	"	"	Me	Me	CH	
1.948	"	"	"	"	Cl	OMe	N	
1.949	"	"	"	Me	OMe	Me	N	
1.950	"	"	"	"	"	OMe	CH	
1.951	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
1.952	"	"	"	"	"	Cl	CH	
1.953	"	"	"	"	Me	Me	CH	
1.954	"	"	"	"	OMe	Me	N	
1.955	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.956	"	"	CO ₂ -n-Pr	"	"	"	CH	
1.957	"	"	CO ₂ -i-Pr	"	"	"	CH	
1.958	Me	CS-NH-n-Pr	CO ₂ -Me	H	OMe	OMe	CH	
1.959	"	"	"	"	"	OMe	N	
1.960	"	"	"	"	"	Me	N	
1.961	"	"	"	"	"	"	CH	
1.962	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.963	"	"	"	"	Me	Me	CH	
1.964	"	"	"	"	"	"	N	
1.965	"	"	"	"	Cl	OMe	CH	
1.966	"	"	"	Me	OMe	OMe	CH	
1.967	"	"	"	"	"	Me	N	
1.968	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.969	"	"	"	"	"	Cl	CH	
1.970	"	"	"	"	Me	Me	CH	
1.971	"	"	"	"	OMe	Me	N	
1.972	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
1.973	"	"	"	Me	OMe	OMe	CH	
1.974	"	"	"	"	OMe	Me	N	
1.975	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
1.976	"	"	"	"	"	"	N	
1.977	"	"	"	"	OMe	Me	N	
1.978	"	"	"	"	Me	Me	CH	

TABLE 1-continued



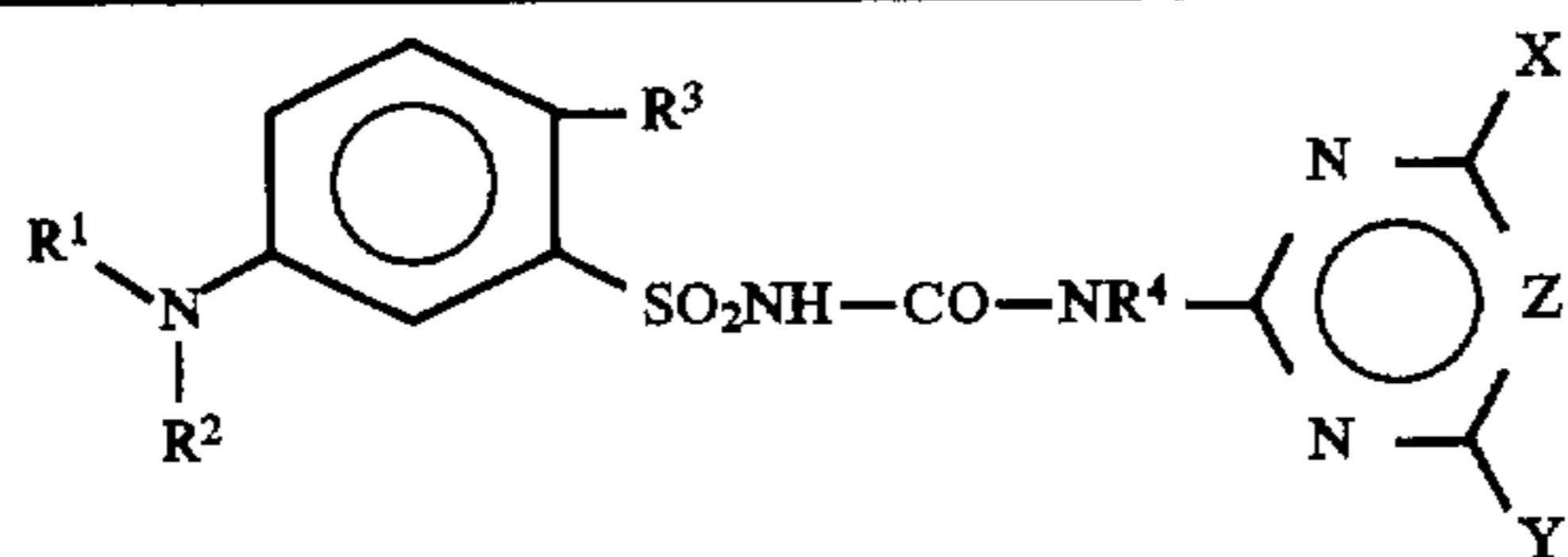
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
1.979	"	"	"	"	OMe	Cl	CH	
1.980	"	"	"	Me	Me	OMe	N	
1.981	"	"	"	"	OMe	OMe	CH	
1.982	Me	CS-NH-n-Pr	CO ₂ -i-Pr	H	OMe	OMe	CH	
1.983	"	"	"	"	"	"	N	
1.984	"	"	"	"	OMe	Me	N	
1.985	"	"	"	"	OMe	Cl	CH	
1.986	"	"	"	"	Me	Me	CH	
1.987	"	"	"	"	SMe	NEt ₂	N	
1.988	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
1.989	"	"	"	"	OMe	OMe	CH	
1.990	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
1.991	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
1.992	"	"	"	H	OMe	Me	N	
1.993	"	"	"	"	Me	Me	CH	
1.994	"	"	"	"	Cl	OMe	CH	
1.995	"	"	"	Me	OMe	OMe	CH	
1.996	"	"	"	"	OMe	Me	N	
1.997	"	"	CO ₂ -Et	H	OMe	OMe	CH	
1.998	"	"	"	"	OMe	Me	CH	
1.999	"	"	"	"	Cl	OMe	CH	
2.000	"	"	"	"	OMe	Me	N	
2.001	"	"	"	Me	OMe	OMe	CH	
2.002	"	"	"	"	"	Me	N	
2.003	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.004	"	"	"	"	OMe	Me	N	
2.005	"	"	"	"	OMe	Cl	CH	
2.006	"	"	"	"	Me	Me	CH	
2.007	"	"	"	Me	OMe	OMe	CH	
2.008	"	"	"	"	OMe	Me	N	
2.009	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.010	"	"	"	"	OMe	Me	N	
2.011	"	"	"	"	Me	Me	CH	
2.012	"	"	"	Me	OMe	Me	N	
2.013	n-Pr	CS-NH-n-Pr	CO ₂ -Me	H	OMe	OMe	CH	
2.014	"	"	"	"	"	Cl	CH	
2.015	"	"	"	"	Me	Me	CH	
2.016	"	"	"	"	OMe	Me	N	
2.017	"	"	"	Me	OMe	OMe	CH	
2.018	"	"	"	"	OMe	Me	N	
2.019	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.020	"	"	"	"	"	OMe	CH	
2.021	"	"	"	"	Me	Me	CH	
2.022	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.023	i-Pr	"	CO ₂ -Me	H	"	"	CH	
2.024	"	"	"	"	"	Me	N	
2.025	"	"	"	"	Me	Me	CH	
2.026	"	"	"	"	Cl	OMe	N	
2.027	"	"	"	Me	OMe	Me	N	
2.028	"	"	"	"	"	OMe	CH	
2.029	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.030	"	"	"	"	"	Cl	CH	
2.031	"	"	"	"	Me	Me	CH	
2.032	"	"	"	"	OMe	Me	N	
2.033	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.034	"	"	CO ₂ -n-Pr	"	"	"	CH	
2.035	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.036	Me	CS-NH-i-Pr	CO ₂ -Me	H	OMe	OMe	CH	
2.037	"	"	"	"	"	OMe	N	
2.038	"	"	"	"	"	Me	N	
2.039	"	"	"	"	"	"	CH	
2.040	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.041	"	"	"	"	Me	Me	CH	
2.042	"	"	"	"	"	"	N	
2.043	"	"	"	"	Cl	OMe	CH	
2.044	"	"	"	Me	OMe	OMe	CH	
2.045	"	"	"	"	"	Me	N	
2.046	"	"	CO ₂ -Et	H	OMe	OMe	CH	

TABLE 1-continued



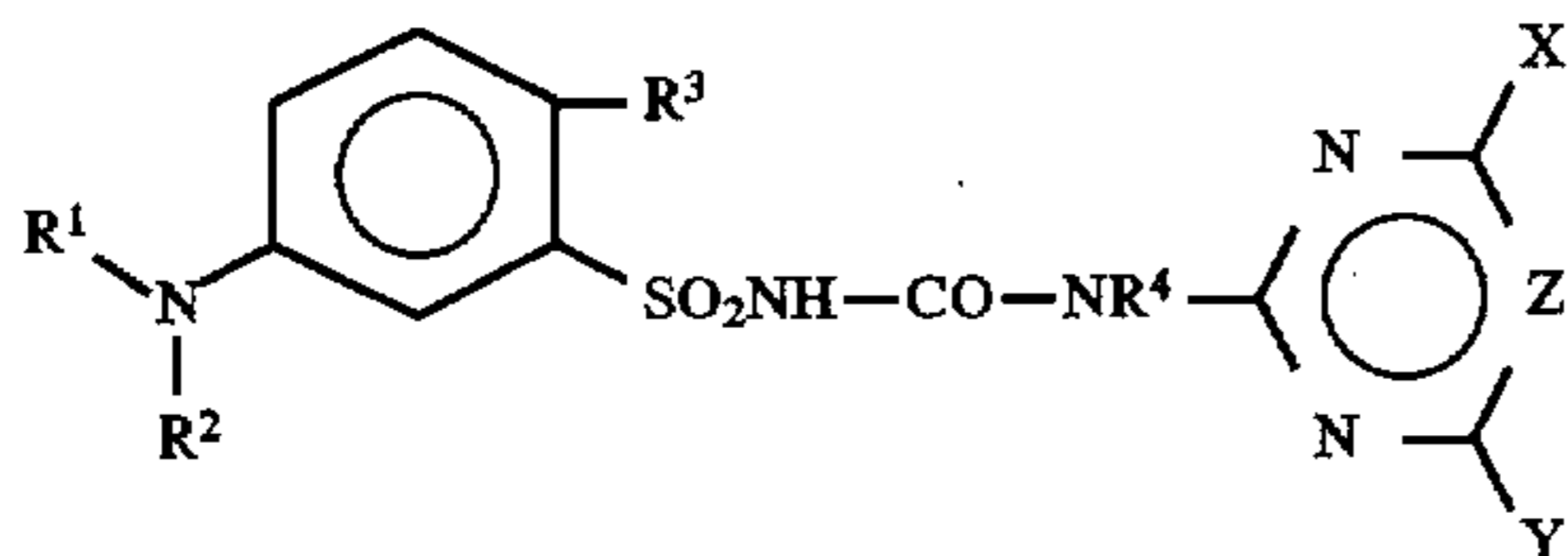
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.047	"	"	"	"	"	Cl	CH	
2.048	"	"	"	"	Me	Me	CH	
2.049	"	"	"	"	OMe	Me	N	
2.050	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.051	"	"	"	Me	OMe	OMe	CH	
2.052	"	"	"	"	OMe	Me	N	
2.053	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.054	"	"	"	"	"	"	N	
2.055	"	"	"	"	OMe	Me	N	
2.056	"	"	"	"	Me	Me	CH	
2.057	"	"	"	"	OMe	Cl	CH	
2.058	"	"	"	Me	Me	OMe	N	
2.059	"	"	"	"	OMe	OMe	CH	
2.060	Me	CS-NH-i-Pr	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.061	"	"	"	"	"	"	N	
2.062	"	"	"	"	OMe	Me	N	
2.063	"	"	"	"	OMe	Cl	CH	
2.064	"	"	"	"	Me	Me	CH	
2.065	"	"	"	"	SMe	NEt ₂	N	
2.066	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.067	"	"	"	"	OMe	OMe	CH	
2.068	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.069	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.070	"	"	"	H	OMe	Me	N	
2.071	"	"	"	"	Me	Me	CH	
2.072	"	"	"	"	Cl	OMe	CH	
2.073	"	"	"	Me	OMe	OMe	CH	
2.074	"	"	"	"	OMe	Me	N	
2.075	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.076	"	"	"	"	OMe	Me	CH	
2.077	"	"	"	"	Cl	OMe	CH	
2.078	"	"	"	"	OMe	Me	N	
2.079	"	"	"	Me	OMe	OMe	CH	
2.080	"	"	"	"	Me	Me	N	
2.081	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.082	"	"	"	"	OMe	Me	N	
2.083	"	"	"	"	OMe	Cl	CH	
2.084	"	"	"	"	Me	Me	CH	
2.085	"	"	"	Me	OMe	OMe	CH	
2.086	"	"	"	"	OMe	Me	N	
2.087	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.088	"	"	"	"	OMe	Me	N	
2.089	"	"	"	"	Me	Me	CH	
2.090	"	"	"	Me	OMe	Me	N	
2.091	n-Pr	CS-NH-i-Pr	CO ₂ -Me	H	OMe	OMe	CH	
2.092	"	"	"	"	"	Cl	CH	
2.093	"	"	"	"	Me	Me	CH	
2.094	"	"	"	"	OMe	Me	N	
2.095	"	"	"	Me	OMe	OMe	CH	
2.096	"	"	"	"	OMe	Me	N	
2.097	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.098	"	"	"	"	"	OMe	CH	
2.099	"	"	"	"	Me	Me	CH	
2.100	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.101	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.102	"	"	"	"	OMe	Me	N	
2.103	"	"	"	"	Me	Me	CH	
2.104	"	"	"	"	Cl	OMe	N	
2.105	"	"	"	Me	OMe	Me	N	
2.106	"	"	"	"	"	OMe	CH	
2.107	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.108	"	"	"	"	"	Cl	CH	
2.109	"	"	"	"	Me	Me	CH	
2.110	"	"	"	"	OMe	Me	N	
2.111	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.112	"	"	CO ₂ -n-Pr	"	"	"	CH	
2.113	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.114	Me	CS-NH-allyl	CO ₂ -Me	H	OMe	OMe	CH	

TABLE 1-continued



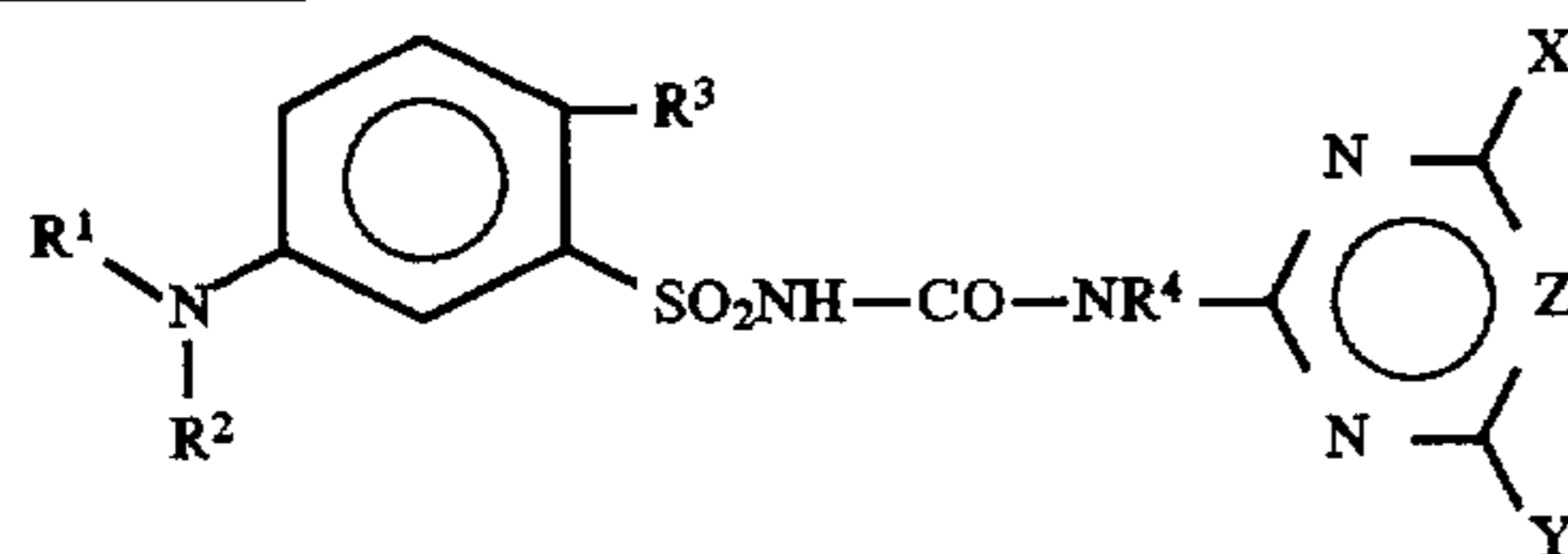
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.115	"	"	"	"	"	OMe	N	
2.116	"	"	"	"	"	Me	N	
2.117	"	"	"	"	"	"	CH	
2.118	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.119	"	"	"	"	Me	Me	CH	
2.120	"	"	"	"	"	"	N	
2.121	"	"	"	"	Cl	OMe	CH	
2.122	"	"	"	Me	OMe	OMe	CH	
2.123	"	"	"	"	"	Me	N	
2.124	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.125	"	"	"	"	"	Cl	CH	
2.126	"	"	"	"	Me	Me	CH	
2.127	"	"	"	"	OMe	Me	N	
2.128	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.129	"	"	"	Me	OMe	OMe	CH	
2.130	"	"	"	"	OMe	Me	N	
2.131	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.132	"	"	"	"	"	"	N	
2.133	"	"	"	"	OMe	Me	N	
2.134	"	"	"	"	Me	Me	CH	
2.135	"	"	"	"	OMe	Cl	CH	
2.136	"	"	"	Me	Me	OMe	N	
2.137	"	"	"	"	OMe	OMe	CH	
2.138	Me	CS-NH-allyl	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.139	"	"	"	"	"	"	N	
2.140	"	"	"	"	H	Me	N	
2.141	"	"	"	"	OMe	Cl	CH	
2.142	"	"	"	"	Me	Me	CH	
2.143	"	"	"	"	SMe	NEt ₂	N	
2.144	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.145	"	"	"	"	OMe	OMe	CH	
2.146	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.147	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.148	"	"	"	H	OMe	Me	N	
2.149	"	"	"	"	Me	Me	CH	
2.150	"	"	"	"	Cl	OMe	CH	
2.151	"	"	"	Me	OMe	OMe	CH	
2.152	"	"	"	"	OMe	Me	N	
2.153	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.154	"	"	"	"	OMe	Me	CH	
2.155	"	"	"	"	Cl	OMe	CH	
2.156	"	"	"	"	OMe	Me	N	
2.157	"	"	"	Me	OMe	OMe	CH	
2.158	"	"	"	"	"	Me	N	
2.159	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.160	"	"	"	"	OMe	Me	N	
2.161	"	"	"	"	OMe	Cl	CH	
2.162	"	"	"	"	Me	Me	CH	
2.163	"	"	"	Me	OMe	OMe	CH	
2.164	"	"	"	"	OMe	Me	N	
2.165	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.166	"	"	"	"	OMe	Me	N	
2.167	"	"	"	"	Me	Me	CH	
2.168	"	"	"	Me	OMe	Me	N	
2.169	n-Pr	CS-NH-allyl	CO ₂ -Me	H	OMe	OMe	CH	
2.170	"	"	"	"	"	Cl	CH	
2.171	"	"	"	"	Me	Me	CH	
2.172	"	"	"	"	OMe	Me	N	
2.173	"	"	"	Me	OMe	OMe	CH	
2.174	"	"	"	"	OMe	Me	N	
2.175	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.176	"	"	"	"	"	OMe	CH	
2.177	"	"	"	"	Me	Me	CH	
2.178	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.179	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.180	"	"	"	"	OMe	Me	N	
2.181	"	"	"	"	Me	Me	CH	
2.182	"	"	"	"	Cl	OMe	N	

TABLE 1-continued



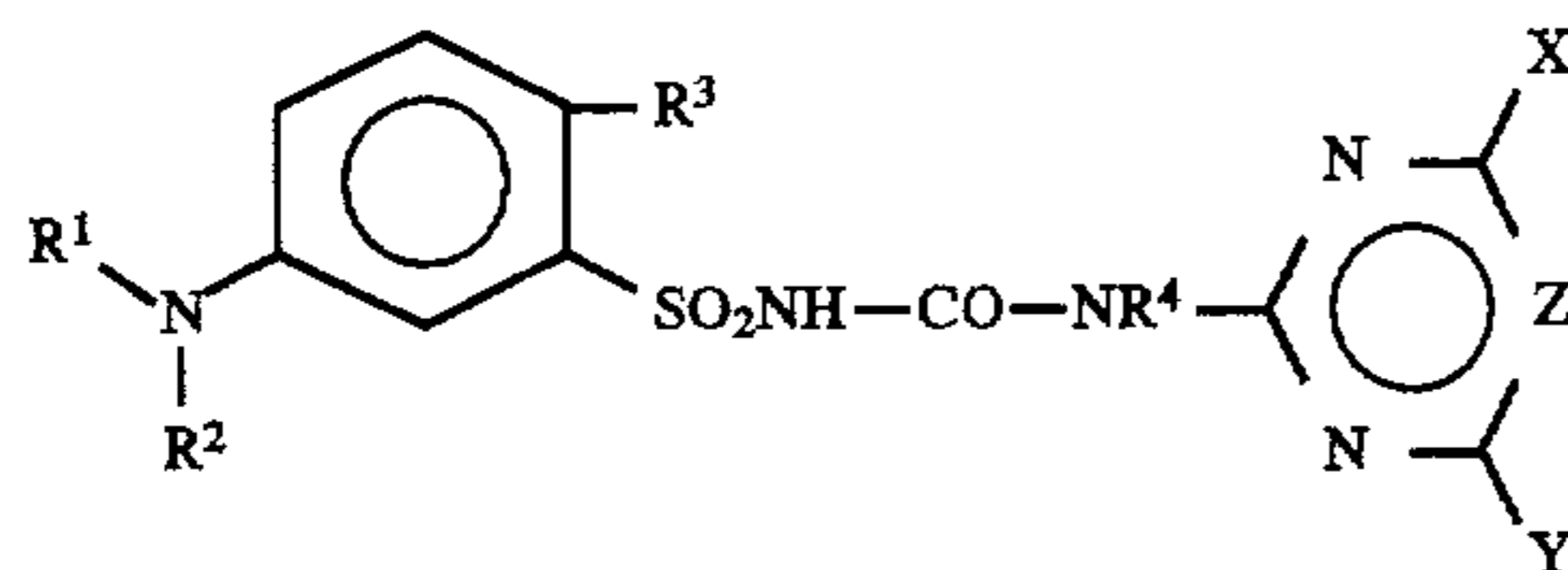
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.183	"	"	"	Me	OMe	Me	N	
2.184	"	"	"	"	"	OMe	CH	
2.185	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.186	"	"	"	"	"	Cl	CH	
2.187	"	"	"	"	Me	Me	CH	
2.188	"	"	"	"	OMe	Me	N	
2.189	"	"	CO ₂ -Et	OMe	OMe	CH		
2.190	"	"	CO ₂ -n-Pr	"	"	"	CH	
2.191	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.192	Me	CS-NH-CO ₂ Et	CO ₂ -Me	H	OMe	OMe	CH	144-145° C.
2.193	"	"	"	"	"	OMe	N	
2.194	"	"	"	"	"	Me	N	
2.195	"	"	"	"	"	"	CH	
2.196	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.197	"	"	"	"	Me	Me	CH	
2.198	"	"	"	"	"	"	N	
2.199	"	"	"	"	Cl	OMe	CH	
2.200	"	"	"	Me	OMe	OMe	CH	
2.201	"	"	"	"	"	Me	N	
2.202	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.203	"	"	"	"	"	Cl	CH	
2.204	"	"	"	"	Me	Me	CH	
2.205	"	"	"	"	OMe	Me	N	
2.206	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.207	"	"	"	M	OMe	OMe	CH	
2.208	"	"	"	"	OMe	Me	N	
2.209	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.210	"	"	"	"	"	"	N	
2.211	"	"	"	"	OMe	OMe	N	
2.212	"	"	"	"	Me	Me	CH	
2.213	"	"	"	"	OMe	Cl	CH	
2.214	"	"	"	Me	Me	OMe	N	
2.215	"	"	"	"	OMe	OMe	CH	
2.216	Me	CS-NH-CO ₂ Et	CO ₂ -i-Pr	N	OMe	OMe	CH	
2.217	"	"	"	"	"	"	N	
2.218	"	"	"	"	OMe	Me	N	
2.219	"	"	"	"	OMe	Cl	CH	
2.220	"	"	"	"	Me	Me	CH	
2.221	"	"	"	"	SMe	NEt ₂	N	
2.222	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.223	"	"	"	"	OMe	OMe	CH	
2.224	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.225	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.226	"	"	"	H	OMe	Me	N	
2.227	"	"	"	"	Me	Me	CH	
2.228	"	"	"	"	Cl	OMe	CH	
2.229	"	"	"	Me	OMe	OMe	CH	
2.230	"	"	"	"	OMe	Me	N	
2.231	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.232	"	"	"	"	OMe	Me	CH	
2.233	"	"	"	"	Cl	OMe	CH	
2.234	"	"	"	"	OMe	Me	N	
2.235	"	"	"	Me	OMe	OMe	CH	
2.236	"	"	"	"	"	Me	N	
2.237	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.238	"	"	"	"	OMe	Me	N	
2.239	"	"	"	"	OMe	Cl	CH	
2.240	"	"	"	"	Me	Me	CH	
2.241	"	"	"	Me	OMe	OMe	CH	
2.242	"	"	"	"	OMe	Me	N	
2.243	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.244	"	"	"	"	OMe	Me	N	
2.245	"	"	"	"	Me	Me	CH	
2.246	"	"	"	Me	OMe	Me	N	
2.247	n-Pr	CS-NH-CO ₂ Et	CO ₂ -Me	H	OMe	OMe	CH	
2.248	"	"	"	"	"	Cl	CH	
2.249	"	"	"	"	Me	Me	CH	
2.250	"	"	"	"	OMe	Me	N	

TABLE 1-continued



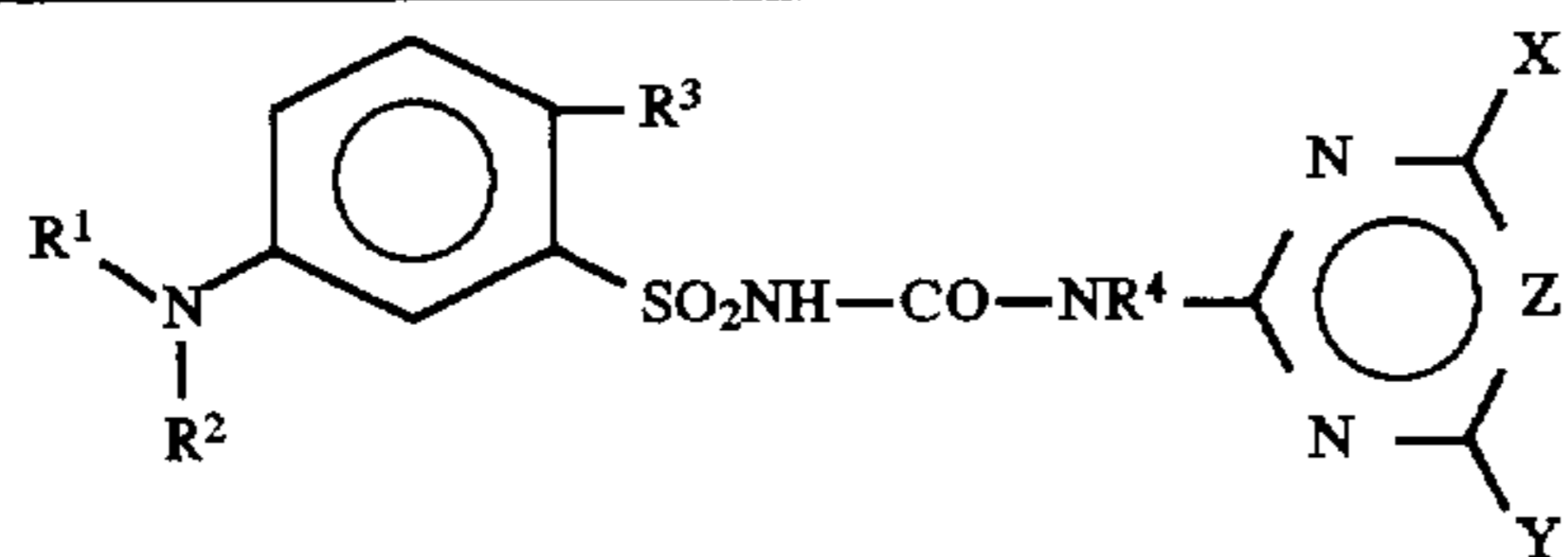
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.251	"	"	"	Me	OMe	OMe	CH	
2.252	"	"	"	"	OMe	Me	N	
2.253	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.254	"	"	"	"	"	OMe	CH	
2.255	"	"	"	"	Me	Me	CH	
2.256	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.257	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.258	"	"	"	"	OMe	Me	N	
2.259	"	"	"	"	Me	Me	CH	
2.260	"	"	"	"	Cl	OMe	N	
2.261	"	"	"	Me	OMe	Me	N	
2.262	"	"	"	"	"	OMe	CH	
2.263	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.264	"	"	"	"	"	Cl	CH	
2.265	"	"	"	"	Me	Me	CH	
2.266	"	"	"	"	OMe	Me	N	
2.267	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.268	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.269	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.270	Me	SO ₂ NHMe	CO ₂ -Me	H	OMe	OMe	CH	117-118° C.
2.271	"	"	"	"	"	OMe	N	
2.272	"	"	"	"	"	Me	N	
2.273	"	"	"	"	"	"	CH	
2.274	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.275	"	"	"	"	Me	Me	CH	
2.276	"	"	"	"	"	"	N	
2.277	"	"	"	"	Cl	OMe	CH	
2.278	"	"	"	Me	OMe	OMe	CH	
2.279	"	"	"	"	"	Me	N	
2.280	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.281	"	"	"	"	"	Cl	CH	
2.282	"	"	"	"	Me	Me	CH	
2.283	"	"	"	"	OMe	Me	N	
2.284	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.285	"	"	"	Me	OMe	OMe	CH	
2.286	"	"	"	"	OMe	Me	N	
2.287	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.288	"	"	"	"	"	"	N	
2.289	"	"	"	"	OMe	Me	N	
2.290	"	"	"	"	Me	Me	CH	
2.291	"	"	"	"	OMe	Cl	CH	
2.292	"	"	"	Me	Me	OMe	N	
2.293	"	"	"	"	OMe	OMe	CH	
2.294	Me	SO ₂ -NHMe	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.295	"	"	"	"	"	"	N	
2.296	"	"	"	"	OMe	Me	N	
2.297	"	"	"	"	Me	Me	CH	
2.298	"	"	"	"	Me	Me	CH	
2.299	"	"	"	"	SMe	NEt ₂	N	
2.300	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.301	"	"	"	"	OMe	OMe	CH	
2.302	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.303	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.304	"	"	"	H	OMe	Me	N	
2.305	"	"	"	"	Me	Me	CH	
2.306	"	"	"	"	Cl	OMe	CH	
2.307	"	"	"	Me	OMe	OMe	CH	
2.308	"	"	"	"	OMe	Me	N	
2.309	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.310	"	"	"	"	OMe	Me	CH	
2.311	"	"	"	"	Cl	OMe	CH	
2.312	"	"	"	"	OMe	Me	N	
2.313	"	"	"	Me	OMe	OMe	CH	
2.314	"	"	"	"	"	Me	N	
2.315	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.316	"	"	"	"	OMe	Me	N	
2.317	"	"	"	"	OMe	Cl	CH	
2.318	"	"	"	"	Me	Me	CH	

TABLE 1-continued



No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.319	"	"	"	Me	OMe	OMe	CH	
2.320	"	"	"	"	OMe	Me	N	
2.321	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.322	"	"	"	"	OMe	Me	N	
2.323	"	"	"	"	Me	Me	CH	
2.324	"	"	"	Me	OMe	Me	N	
2.325	n-Pr	SO ₂ NHMe	CO ₂ -Me	H	OMe	OMe	CH	
2.326	"	"	"	"	"	Cl	CH	
2.327	"	"	"	"	Me	Me	CH	
2.328	"	"	"	"	OMe	Me	N	
2.329	"	"	"	Me	OMe	OMe	CH	
2.330	"	"	"	"	OMe	Me	N	
2.331	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.332	"	"	"	"	"	OMe	CH	
2.333	"	"	"	"	Me	Me	CH	
2.334	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.335	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.336	"	"	"	"	OMe	Me	N	
2.337	"	"	"	"	Me	Me	CH	
2.338	"	"	"	"	Cl	OMe	N	
2.339	"	"	"	Me	OMe	Me	N	
2.340	"	"	"	"	"	OMe	CH	
2.341	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.342	"	"	"	"	"	Cl	CH	
2.343	"	"	"	"	Me	Me	CH	
2.344	"	"	"	"	OMe	Me	N	
2.345	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.346	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.347	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.348	Me	SO ₂ NMe ₂	CO ₂ -Me	H	OMe	OMe	CH	
2.349	"	"	"	"	"	OMe	N	
2.350	"	"	"	"	"	Me	N	
2.351	"	"	"	"	"	"	CH	
2.352	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.353	"	"	"	"	Me	Me	CH	
2.354	"	"	"	"	"	"	N	
2.355	"	"	"	"	Cl	OMe	CH	
2.356	"	"	"	Me	OMe	OMe	CH	
2.357	"	"	"	"	"	Me	N	
2.358	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.359	"	"	"	"	"	Cl	CH	
2.360	"	"	"	"	Me	Me	CH	
2.361	"	"	"	"	OMe	Me	N	
2.362	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.363	"	"	"	Me	OMe	OMe	CH	
2.364	"	"	"	"	OMe	Me	N	
2.365	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.366	"	"	"	"	"	"	N	
2.367	"	"	"	"	OMe	Me	N	
2.368	"	"	"	"	Me	Me	CH	
2.369	"	"	"	"	OMe	Cl	CH	
2.370	"	"	"	Me	Me	OMe	N	
2.371	"	"	"	"	OMe	OMe	CH	
2.372	Me	SO ₂ NMe ₂	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.373	"	"	"	"	"	"	N	
2.374	"	"	"	"	OMe	Me	N	
2.375	"	"	"	"	OMe	Cl	CH	
2.376	"	"	"	"	Me	Me	CH	
2.377	"	"	"	"	SMe	NEt ₂	N	
2.378	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.379	"	"	"	"	OMe	OMe	CH	
2.380	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.381	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.382	"	"	"	H	OMe	Me	N	
2.383	"	"	"	"	Me	Me	CH	
2.384	"	"	"	"	Cl	OMe	CH	
2.385	"	"	"	Me	OMe	OMe	CH	
2.386	"	"	"	"	OMe	Me	N	

TABLE 1-continued



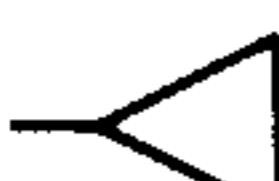
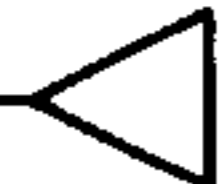

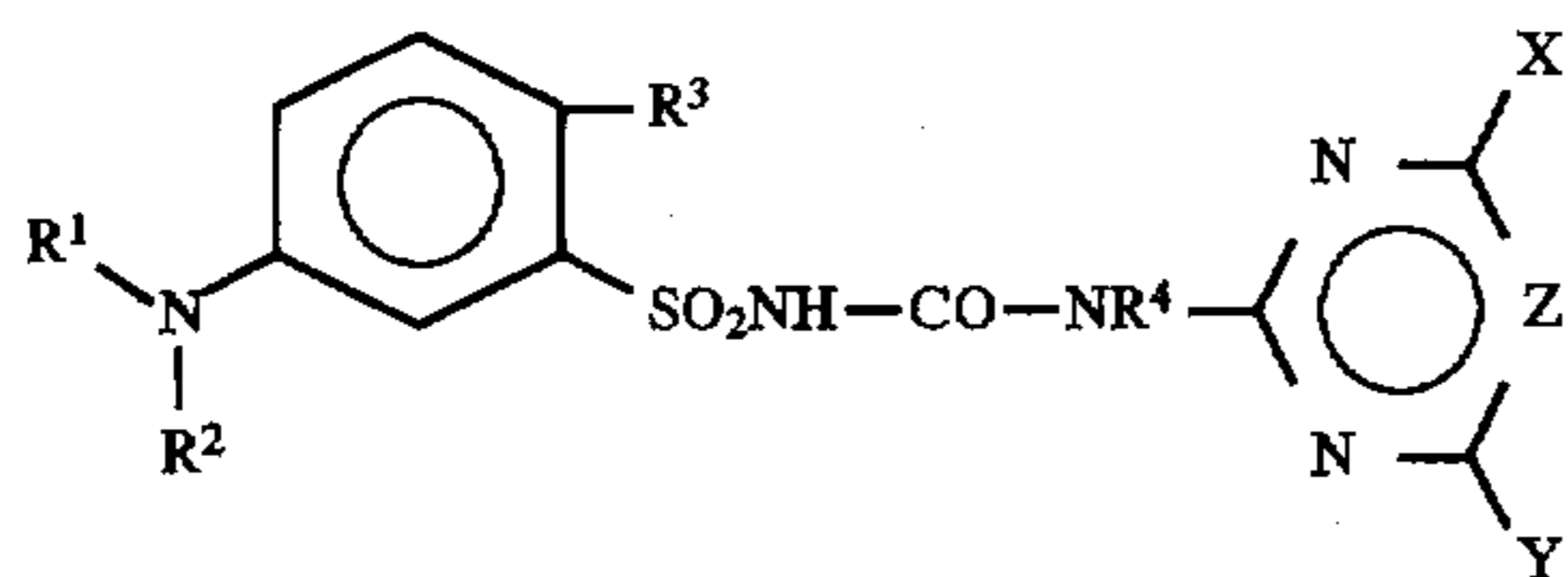
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.387	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.388	"	"	"	"	OMe	Me	CH	
2.389	"	"	"	"	Cl	OMe	CH	
2.390	"	"	"	"	OMe	Me	N	
2.391	"	"	"	Me	OMe	OMe	CH	
2.392	"	"	"	"	"	Me	N	
2.393	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.394	"	"	"	"	OMe	Me	N	
2.395	"	"	"	"	OMe	Cl	CH	
2.396	"	"	"	"	Me	Me	CH	
2.397	"	"	"	Me	OMe	OMe	CH	
2.398	"	"	"	"	OMe	Me	N	
2.399	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.400	"	"	"	"	OMe	Me	N	
2.401	"	"	"	"	Me	Me	CH	
2.402	"	"	"	Me	OMe	Me	N	
2.403	n-Pr	SO ₂ NMe ₂	CO ₂ -Me	H	OMe	OMe	CH	
2.404	"	"	"	"	"	Cl	CH	
2.405	"	"	"	"	Me	Me	CH	
2.406	"	"	"	"	OMe	Me	N	
2.407	"	"	"	Me	OMe	OMe	CH	
2.408	"	"	"	"	OMe	Me	N	
2.409	n-Pr	"	CO ₂ -Et	H	OMe	Me	N	
2.410	"	"	"	"	"	OMe	CH	
2.411	"	"	"	"	Me	Me	CH	
2.412	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.413	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.414	"	"	"	"	OMe	Me	N	
2.415	"	"	"	"	Me	Me	CH	
2.416	"	"	"	"	Cl	OMe	N	
2.417	"	"	"	Me	OMe	Me	N	
2.418	"	"	"	"	"	OMe	CH	
2.419	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.420	"	"	"	"	"	Cl	CH	
2.421	"	"	"	"	Me	Me	CH	
2.422	"	"	"	"	OMe	Me	N	
2.423	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.424	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.425	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.426	Me	CHO	CO ₂ CH ₂ 	H	OMe	OMe	CH	
2.427	"	"	"	H	OMe	Me	N	
2.428	"	"	"	"	Me	Me	CH	
2.429	"	CO-CH ₃	"	"	OMe	OMe	CH	
2.430	"	"	"	"	OMe	Me	N	
2.431	"	"	"	"	Me	Me	CH	
2.432	"	COCH ₂ CH ₃	"	"	OMe	OMe	CH	
2.433	Et	CHO	"	"	"	"	CH	
2.434	Pr	"	"	"	"	"	CH	
2.435	Et	COCH ₃	"	"	"	"	CH	
2.436	Pr	"	"	"	"	"	CH	
2.437	Et	COCH ₂ CH ₃	"	"	"	"	CH	
2.438	Me	CO 	"	"	"	"	CH	
2.439	Me	CO ₂ Me	"	"	"	"	CH	
2.440	Et	"	"	"	"	"	CH	
2.441	Pr	"	"	"	"	"	CH	
2.442	Me	CO-NHEt	"	"	"	"	CH	
2.443	Et	"	"	"	"	"	CH	
2.444	Pr	"	"	"	"	"	CH	
2.445	Me	CHO	CO ₂ 	H	OMe	OMe	CH	

TABLE 1-continued



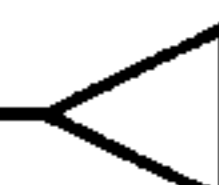
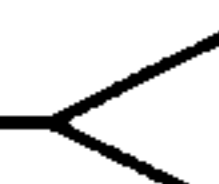
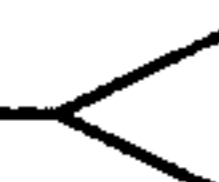
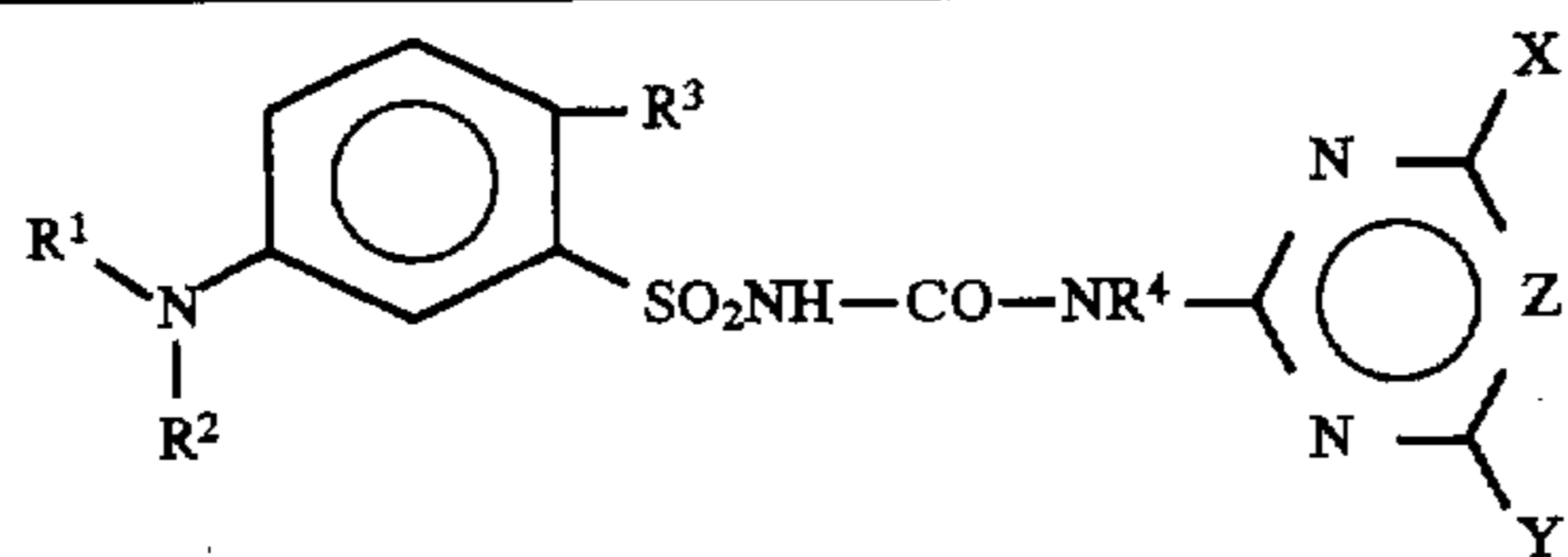
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.446	"	"	"	H	OMe	Me	N	
2.447	"	"	"	"	Me	Me	CH	
2.448	"	CO-CH ₃	"	"	OMe	OMe	CH	
2.449	"	"	"	"	OMe	Me	N	
2.450	"	"	"	"	Me	Me	CH	
2.451	"	COCH ₂ CH ₃	"	"	OMe	OMe	CH	
2.452	Et	CHO	"	"	"	"	CH	
2.453	Pr	"	"	"	"	"	CH	
2.454	Et	COCH ₃	"	"	"	"	CH	
2.455	Pr	"	"	"	"	"	CH	
2.456	Et	COCH ₂ CH ₃	"	"	"	"	CH	
2.457	Me	CO 	"	"	"	"	CH	
2.458	Me	CO ₂ Me	"	"	"	"	CH	
2.459	Et	"	"	"	"	"	CH	
2.460	Pr	"	"	"	"	"	CH	
2.461	Me	CO-NHEt	"	"	"	"	CH	
2.462	Et	"	"	"	"	"	CH	
2.463	Pr	"	"	"	"	"	CH	
2.464	Me	CHO	CO ₂ -N=CHMe ₂	H	OMe	OMe	CH	
2.465	"	"	"	H	OMe	Me	N	
2.466	"	"	"	"	Me	Me	CH	
2.467	"	CO-CH ₃	"	"	OMe	OMe	CH	
2.468	"	"	"	"	OMe	Me	N	
2.469	"	"	"	"	Me	Me	CH	
2.470	"	COCH ₂ CH ₃	"	"	OMe	OMe	CH	
2.471	Et	CHO	"	"	"	"	CH	
2.472	Pr	"	"	"	"	"	CH	
2.473	Et	COCH ₃	"	"	"	"	CH	
2.474	Pr	"	"	"	"	"	CH	
2.475	Et	COCH ₂ CH ₃	"	"	"	"	CH	
2.476	Me	CO 	"	"	"	"	CH	
2.477	Me	CO ₂ Me	"	"	"	"	CH	
2.478	Et	"	"	"	"	"	CH	
2.479	Pr	"	"	"	"	"	CH	
2.480	Me	CO-NHEt	"	"	"	"	CH	
2.481	Et	"	"	"	"	"	CH	
2.482	Pr	"	"	"	"	"	CH	
2.483	Me	CHO	CO ₂ CH ₂ CH ₂ Cl	H	OMe	OMe	CH	
2.484	"	"	"	"	OMe	Me	N	
2.485	"	"	"	"	Me	Me	CH	
2.486	"	CO-CH ₃	"	"	OMe	OMe	CH	
2.487	"	"	"	"	OMe	Me	N	
2.488	"	"	"	"	Me	Me	CH	
2.489	"	COCH ₂ CH ₃	"	"	OMe	OMe	CH	
2.490	Et	CHO	"	"	"	"	"	
2.491	Pr	"	"	"	"	"	"	
2.492	Et	COCH ₃	"	"	"	"	"	
2.493	Pr	"	"	"	"	"	"	
2.494	Et	COCH ₂ CH ₃	"	"	"	"	"	
2.495	Me	CO 	"	"	"	"	"	
2.496	Me	CO ₂ Me	"	"	"	"	"	
2.497	Et	"	"	"	"	"	"	
2.498	Pr	"	"	"	"	"	"	
2.499	Me	CO-NHEt	"	"	"	"	"	
2.500	Et	"	"	"	"	"	"	
2.501	Pr	"	"	"	"	"	"	
2.502	Me	CHO	CO ₂ (CH ₂) ₂ OMe	H	OMe	OMe	CH	

TABLE 1-continued



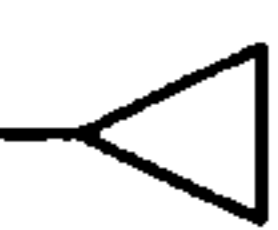
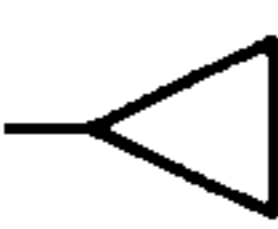
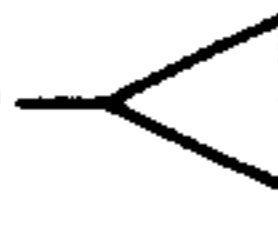
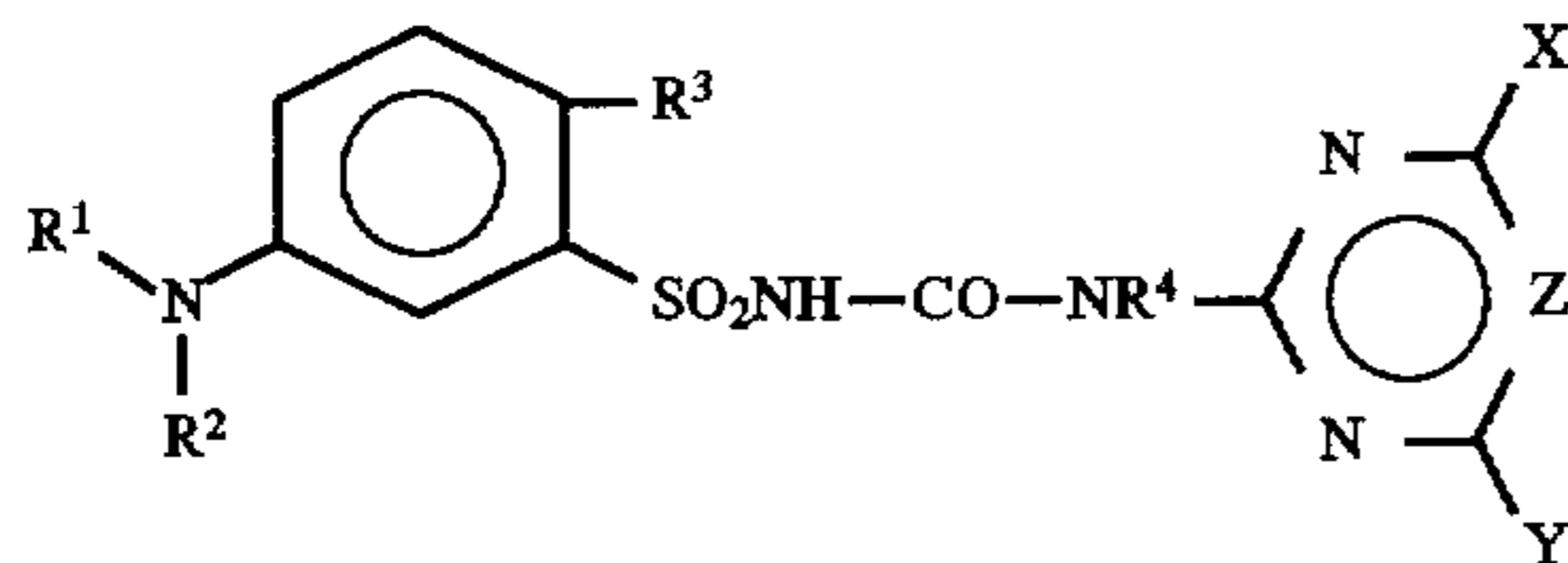
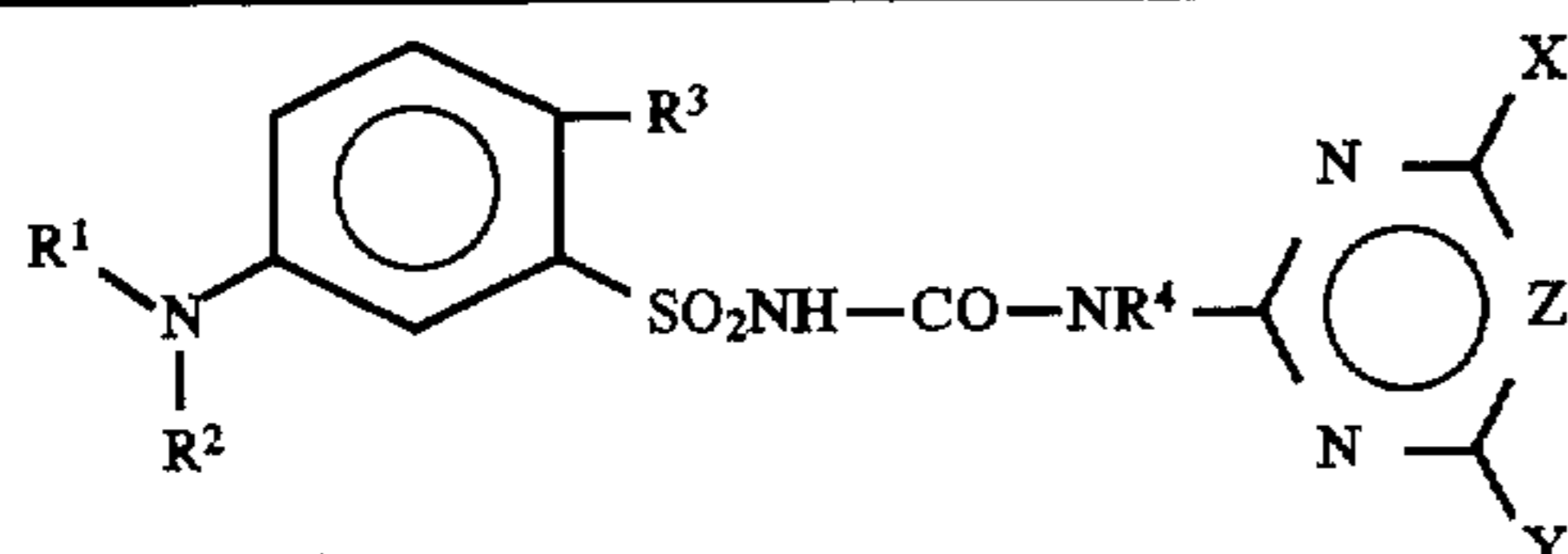
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.503	"	"	"	H	OMe	Me	N	
2.504	"	"	"	"	Me	Me	CH	
2.505	"	CO-CH ₃	"	"	OMe	OMe	CH	
2.506	"	"	"	"	OMe	Me	N	
2.507	"	"	"	"	Me	Me	CH	
2.508	"	COCH ₂ CH ₃	"	"	OMe	OMe	CH	
2.509	Et	CHO	"	"	"	"	"	
2.510	Pr	"	"	"	"	"	"	
2.511	Et	COCH ₃	"	"	"	"	"	
2.512	Pr	"	"	"	"	"	"	
2.513	Et	COCH ₂ CH ₃	"	"	"	"	"	
2.514	Me	CO 	"	"	"	"	"	
2.515	Me	CO ₂ Me	"	"	"	"	"	
2.516	Et	"	"	"	"	"	"	
2.517	Pr	"	"	"	"	"	"	
2.518	Me	CO-NHEt	"	"	"	"	"	
2.519	Et	"	"	"	"	"	"	
2.520	Pr	"	"	"	"	"	"	
2.521	Me	CHO	CO ₂ CH ₂ CCl ₃	H	OMe	OMe	CH	
2.522	"	"	"	H	OMe	Me	N	
2.523	"	"	"	"	Me	Me	CH	
2.524	"	CO-CH ₃	"	"	OMe	OMe	CH	
2.525	"	"	"	"	OMe	Me	N	
2.526	"	"	"	"	Me	Me	CH	
2.527	"	COCH ₂ CH ₃	"	"	OMe	OMe	CH	
2.528	Et	CHO	"	"	"	"	"	
2.529	Pr	"	"	"	"	"	"	
2.530	Et	COCH ₃	"	"	"	"	"	
2.531	Pr	"	"	"	"	"	"	
2.532	Et	COCH ₂ CH ₃	"	"	"	"	"	
2.533	Me	CO 	"	"	"	"	"	
2.534	Me	CO ₂ Me	"	"	"	"	"	
2.535	Et	"	"	"	"	"	"	
2.536	Pr	"	"	"	"	"	"	
2.537	Me	CO-NHEt	"	"	"	"	"	
2.538	Et	"	"	"	"	"	"	
2.539	Pr	"	"	"	"	"	"	
2.540	Me	CHO	CO ₂ CH ₂ C≡CH	H	OMe	OMe	CH	
2.541	"	"	"	H	OMe	Me	N	
2.542	"	"	"	"	Me	Me	CH	
2.543	"	CO-CH ₃	"	"	OMe	OMe	CH	
2.544	"	"	"	"	OMe	Me	N	
2.545	"	"	"	"	Me	Me	CH	
2.546	"	COCH ₂ CH ₃	"	"	OMe	OMe	CH	
2.547	Et	CHO	"	"	"	"	"	
2.548	Pr	"	"	"	"	"	"	
2.549	Et	COCH ₃	"	"	"	"	"	
2.550	Pr	"	"	"	"	"	"	
2.551	Et	COCH ₂ CH ₃	"	"	"	"	"	
2.552	Me	CO 	"	"	"	"	"	
2.553	Me	CO ₂ Me	"	"	"	"	"	
2.554	Et	"	"	"	"	"	"	
2.555	Pr	"	"	"	"	"	"	
2.556	Me	CO-NHEt	"	"	"	"	"	
2.557	Et	"	"	"	"	"	"	
2.558	Pr	"	"	"	"	"	"	
2.559	Me	SO ₂ Et	CO ₂ Me	H	OMe	OMe	CH	

TABLE 1-continued



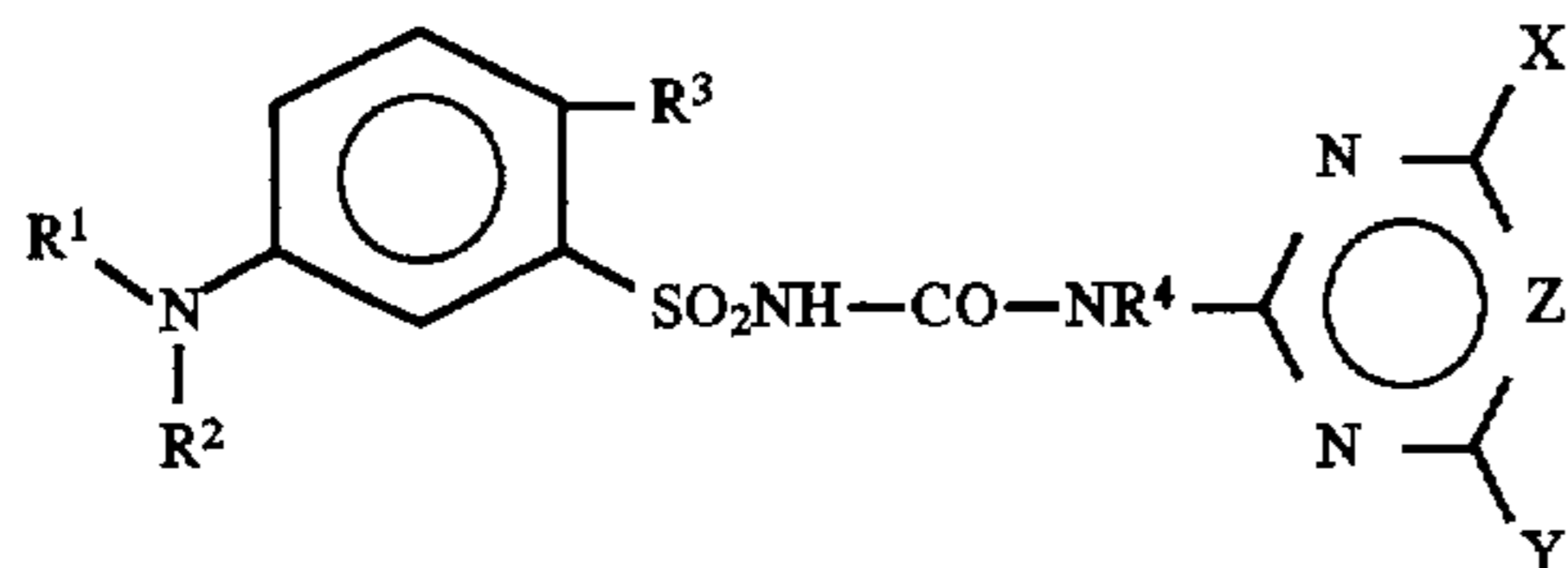
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.560	"	"	"	"	"	OMe	N	
2.561	"	"	"	"	"	Me	N	
2.562	"	"	"	"	"	"	CH	
2.563	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.564	"	"	"	"	Me	Me	CH	
2.565	"	"	"	"	"	"	N	
2.566	"	"	"	"	Cl	OMe	CH	
2.567	"	"	"	Me	OMe	OMe	CH	
2.568	"	"	"	"	"	Me	N	
2.569	"	"	CO ₂ Et	H	OMe	OMe	CH	
2.570	"	"	"	"	"	Cl	CH	
2.571	"	"	"	"	Me	Me	CH	
2.572	"	"	"	"	OMe	Me	N	
2.573	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.574	"	"	"	Me	OMe	OMe	CH	
2.575	"	"	"	"	OMe	Me	N	
2.576	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.577	"	"	"	"	"	"	N	
2.578	"	"	"	"	OMe	Me	N	
2.579	"	"	"	"	Me	Me	CH	
2.580	"	"	"	"	OMe	Cl	CH	
2.581	"	"	"	Me	Me	OMe	N	
2.582	"	"	"	"	OMe	OMe	CH	
2.583	Me	SO ₂ Et	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.584	"	"	"	"	"	"	N	
2.585	"	"	"	"	OMe	Me	N	
2.586	"	"	"	"	OMe	Cl	CH	
2.587	"	"	"	"	Me	Me	CH	
2.588	"	"	"	"	SMe	NEt ₂	N	
2.589	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.590	"	"	"	"	OMe	OMe	CH	
2.591	Me	"	CO ₂ -allyl	H	OMe	OMe	CH	
2.592	Et	"	CO ₂ Me	H	OMe	OMe	CH	
2.593	"	"	"	H	OMe	Me	N	
2.594	"	"	"	"	Me	Me	CH	
2.595	"	"	"	"	Cl	OMe	CH	
2.596	"	"	"	Me	OMe	OMe	CH	
2.597	"	"	"	"	OMe	Me	N	
2.598	"	"	CO ₂ Et	H	OMe	OMe	CH	
2.599	"	"	"	"	OMe	Me	CH	
2.600	"	"	"	"	Cl	OMe	CH	
2.601	"	"	"	"	OMe	Me	N	
2.602	"	"	"	Me	OMe	OMe	CH	
2.603	"	"	"	"	"	Me	N	
2.604	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.605	"	"	"	"	OMe	Me	N	
2.606	"	"	"	"	OMe	Cl	CH	
2.607	"	"	"	"	Me	Me	CH	
2.608	"	"	"	Me	OMe	OMe	CH	
2.609	"	"	"	"	OMe	Me	N	
2.610	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.611	"	"	"	"	OMe	Me	N	
2.612	"	"	"	"	Me	Me	CH	
2.613	"	"	"	Me	OMe	Me	N	
2.614	n-Pr	SO ₂ Et	CO ₂ Me	H	OMe	OMe	CH	
2.615	"	"	"	"	"	Cl	CH	
2.616	"	"	"	"	Me	Me	CH	
2.617	"	"	"	"	OMe	Me	N	
2.618	"	"	"	Me	OMe	OMe	CH	
2.619	"	"	"	"	OMe	Me	N	
2.620	n-Pr	"	CO ₂ Et	H	"	"	N	
2.621	"	"	"	"	"	OMe	CH	
2.622	"	"	"	"	Me	Me	CH	
2.623	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.624	i-Pr	"	CO ₂ Me	H	"	"	CH	
2.625	"	"	"	"	"	Me	N	
2.626	"	"	"	"	Me	Me	CH	
2.627	"	"	"	"	Cl	OMe	N	

TABLE 1-continued



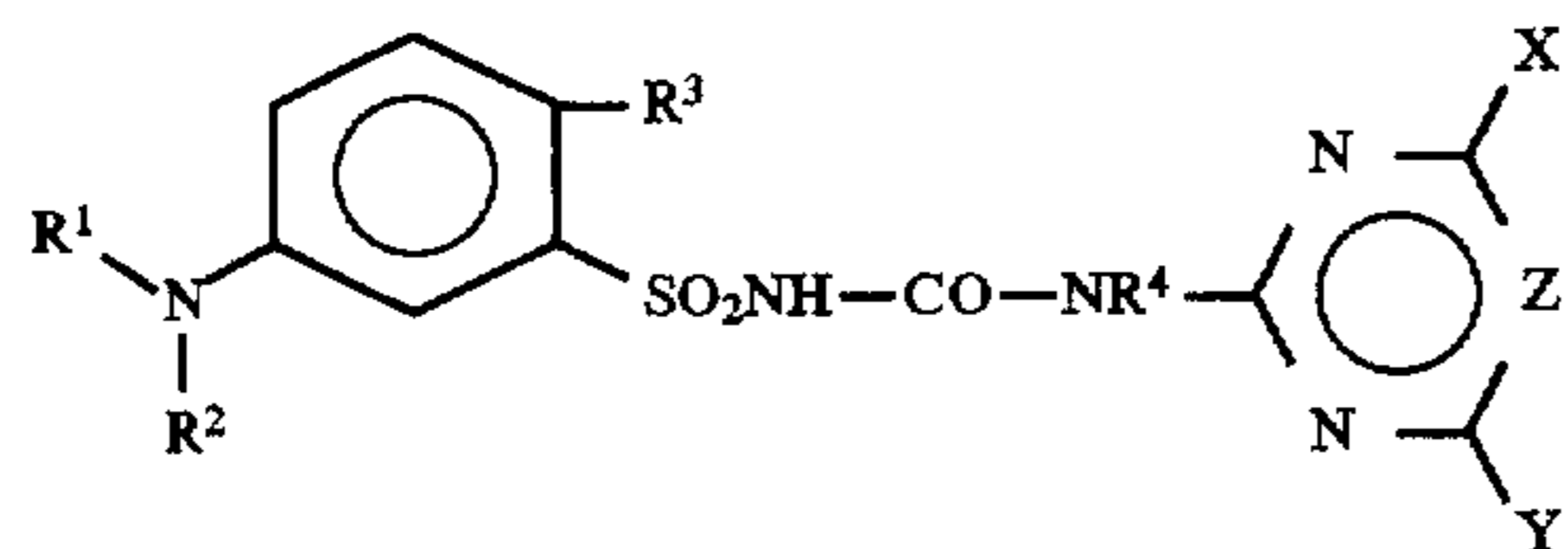
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.628	"	"	"	Me	OMe	Me	N	
2.629	"	"	"	"	"	OMe	CH	
2.630	Allyl	"	CO ₂ Me	H	OMe	OMe	CH	
2.631	"	"	"	"	"	Cl	CH	
2.632	"	"	"	"	Me	Me	CH	
2.633	"	"	"	"	OMe	Me	N	
2.634	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.635	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.636	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.637	Me	SO ₂ CH ₂ Cl	CO ₂ -Me	H	OMe	OMe	CH	
2.638	"	"	"	"	"	OMe	N	
2.639	"	"	"	"	"	Me	N	
2.640	"	"	"	"	"	"	CH	
2.641	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.642	"	"	"	"	Me	Me	CH	
2.643	"	"	"	"	"	"	N	
2.644	"	"	"	"	Cl	OMe	CH	
2.645	"	"	"	Me	OMe	OMe	CH	
2.646	"	"	"	"	"	Me	N	
2.647	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.648	"	"	"	"	"	Cl	CH	
2.649	"	"	"	"	Me	Me	CH	
2.650	"	"	"	"	OMe	Me	N	
2.651	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.652	"	"	"	Me	OMe	OMe	CH	
2.653	"	"	"	"	OMe	Me	N	
2.654	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.655	"	"	"	"	"	"	N	
2.656	"	"	"	"	OMe	Me	N	
2.657	"	"	"	"	Me	Me	CH	
2.658	"	"	"	"	OMe	Cl	CH	
2.659	"	"	"	Me	Me	OMe	N	
2.660	"	"	"	"	OMe	OMe	CH	
2.661	Me	SO ₂ CH ₂ Cl	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.662	"	"	"	"	"	"	N	
2.663	"	"	"	"	OMe	Me	N	
2.664	"	"	"	"	OMe	Cl	CH	
2.665	"	"	"	"	Me	Me	CH	
2.666	"	"	"	"	SMe	NEt ₂	N	
2.667	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.668	"	"	"	"	OMe	OMe	CH	
2.669	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.670	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.671	"	"	"	H	OMe	Me	N	
2.672	"	"	"	"	Me	Me	CH	
2.673	"	"	"	"	Cl	OMe	CH	
2.674	"	"	"	Me	OMe	OMe	CH	
2.675	"	"	"	"	OMe	Me	N	
2.676	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.677	"	"	"	"	OMe	Me	CH	
2.678	"	"	"	"	Cl	OMe	CH	
2.679	"	"	"	"	OMe	Me	N	
2.680	"	"	"	Me	OMe	OMe	CH	
2.681	"	"	"	"	"	Me	N	
2.682	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.683	"	"	"	"	OMe	Me	N	
2.684	"	"	"	"	OMe	Cl	CH	
2.685	"	"	"	"	Me	Me	CH	
2.686	"	"	"	Me	OMe	OMe	CH	
2.687	"	"	"	"	"	Me	N	
2.688	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.689	"	"	"	"	OMe	Me	N	
2.690	"	"	"	"	Me	Me	CH	
2.691	"	"	"	Me	OMe	Me	N	
2.692	n-Pr	SO ₂ CH ₂ Cl	CO ₂ -Me	H	OMe	OMe	CH	
2.693	"	"	"	"	"	Cl	CH	
2.694	"	"	"	"	Me	Me	CH	
2.695	"	"	"	"	OMe	Me	N	

TABLE 1-continued



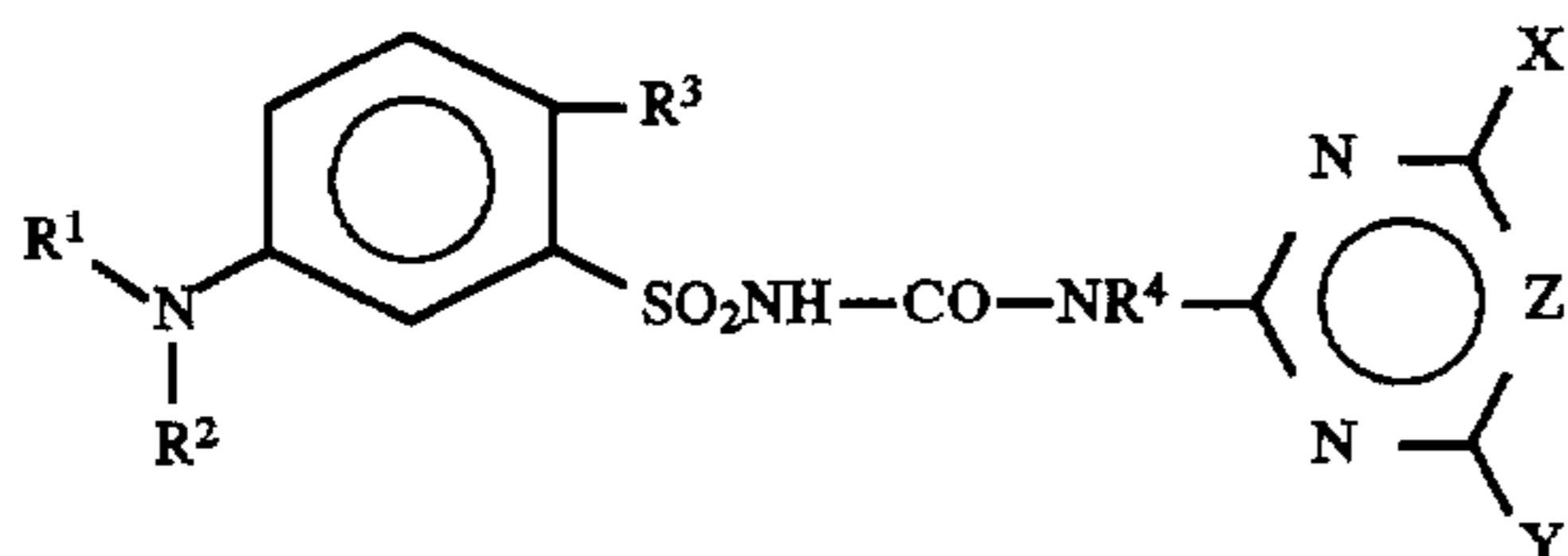
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.696	"	"	"	Me	OMe	OMe	CH	
2.697	"	"	"	"	"	Me	N	
2.698	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.699	"	"	"	"	"	OMe	CH	
2.700	"	"	"	"	Me	Me	CH	
2.701	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.702	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.703	"	"	"	"	OMe	Me	N	
2.704	"	"	"	"	Me	Me	CH	
2.705	"	"	"	"	Cl	OMe	N	
2.706	"	"	"	Me	OMe	Me	N	
2.707	"	"	"	"	"	OMe	CH	
2.708	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.709	"	"	"	"	"	Cl	CH	
2.710	"	"	"	"	Me	Me	CH	
2.711	"	"	"	"	OMe	Me	N	
2.712	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.713	"	"	CO ₂ -n-Pr	"	"	"	CH	
2.714	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.715	Me	SO ₂ CH ₃	CO ₂ -Me	H	OMe	OMe	CH	119° C.
2.716	"	"	"	"	"	OMe	N	
2.717	"	"	"	"	"	Me	N	
2.718	"	"	"	"	"	"	CH	
2.719	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.720	"	"	"	"	Me	Me	CH	
2.721	"	"	"	"	"	"	N	
2.722	"	"	"	"	Cl	OMe	CH	
2.723	"	"	"	Me	OMe	OMe	CH	
2.724	"	"	"	"	"	Me	N	
2.725	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.726	"	"	"	"	"	Cl	CH	
2.727	"	"	"	"	Me	Me	CH	
2.728	"	"	"	"	OMe	Me	N	
2.729	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.730	"	"	"	Me	OMe	OMe	CH	
2.731	"	"	"	"	OMe	Me	N	
2.732	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.733	"	"	"	"	"	"	N	
2.734	"	"	"	"	OMe	Me	N	
2.735	"	"	"	"	Me	Me	CH	
2.736	"	"	"	"	OMe	Cl	CH	
2.737	"	"	"	Me	Me	OMe	N	
2.738	"	"	"	"	OMe	OMe	CH	
2.739	Me	SO ₂ Me	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.740	"	"	"	"	"	"	N	
2.741	"	"	"	"	OMe	Me	N	
2.742	"	"	"	"	OMe	Cl	CH	
2.743	"	"	"	"	Me	Me	CH	
2.744	"	"	"	"	SMe	NEt ₂	N	
2.745	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.746	"	"	"	"	OMe	OMe	CH	
2.747	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.748	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.749	"	"	"	H	OMe	Me	N	
2.750	"	"	"	"	Me	Me	CH	
2.751	"	"	"	"	Cl	OMe	CH	
2.752	"	"	"	Me	OMe	OMe	CH	
2.753	"	"	"	"	OMe	Me	N	
2.754	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.755	"	"	"	"	OMe	Me	CH	
2.756	"	"	"	"	Cl	OMe	CH	
2.757	"	"	"	"	OMe	Me	N	
2.758	"	"	"	Me	OMe	OMe	CH	
2.759	"	"	"	"	"	Me	N	
2.760	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.761	"	"	"	"	OMe	Me	N	
2.762	"	"	"	"	OMe	Cl	CH	
2.763	"	"	"	"	Me	Me	CH	

TABLE 1-continued



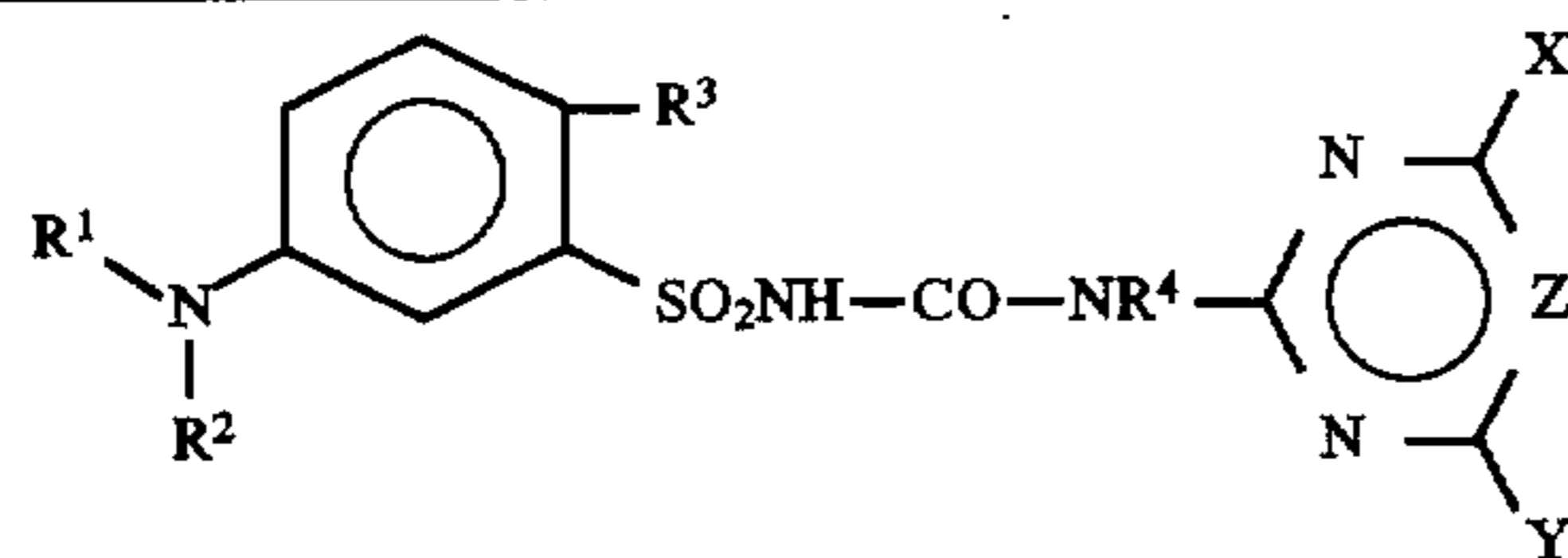
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.764	"	"	"	Me	OMe	OMe	CH	
2.765	"	"	"	"	OMe	Me	N	
2.766	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.767	"	"	"	"	OMe	Me	N	
2.768	"	"	"	"	Me	Me	CH	
2.769	"	"	"	Me	OMe	Me	N	
2.770	n-Pr	SO ₂ Me	CO ₂ -Me	H	OMe	OMe	CH	
2.771	"	"	"	"	"	Cl	CH	
2.772	"	"	"	"	Me	Me	CH	
2.773	"	"	"	"	OMe	Me	N	
2.774	"	"	"	Me	OMe	OMe	CH	
2.775	"	"	"	"	OMe	Me	N	
2.776	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.777	"	"	"	"	"	OMe	CH	
2.778	"	"	"	"	Me	Me	CH	
2.779	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.780	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.781	"	"	"	"	OMe	Me	N	
2.782	"	"	"	"	Me	Me	CH	
2.783	"	"	"	"	Cl	OMe	N	
2.784	"	"	"	Me	OMe	Me	N	
2.785	"	"	"	"	"	OMe	CH	
2.786	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.787	"	"	"	"	"	Cl	CH	
2.788	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.789	"	"	"	"	"	Cl	CH	
2.790	"	"	"	"	Me	Me	CH	
2.791	"	"	"	"	OMe	Me	N	
2.792	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.793	"	"	CO ₂ -n-Pr	"	"	"	CH	
2.794	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.795	Me	CONH- CH ₂ CH ₂ Cl	CO ₂ -Me	H	OMe	OMe	CH	
2.796	"	"	"	"	"	OMe	N	
2.797	"	"	"	"	"	Me	N	
2.798	"	"	"	"	"	"	CH	
2.799	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.800	"	"	"	"	Me	Me	CH	
2.801	"	"	"	"	"	"	N	
2.802	"	"	"	"	Cl	OMe	CH	
2.803	"	"	"	Me	OMe	OMe	CH	
2.804	"	"	"	"	"	Me	N	
2.805	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.806	"	"	"	"	"	Cl	CH	
2.807	"	"	"	"	Me	Me	CH	
2.808	"	"	"	"	OMe	Me	N	
2.809	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.810	"	"	"	Me	OMe	OMe	CH	
2.811	"	"	"	"	OMe	Me	N	
2.812	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.813	"	"	"	"	"	"	N	
2.814	"	"	"	"	OMe	Me	N	
2.815	"	"	"	"	Me	Me	CH	
2.816	"	"	"	"	OMe	Cl	CH	
2.817	"	"	"	Me	Me	OMe	N	
2.818	"	"	"	"	OMe	OMe	CH	
2.819	Me	CO- NHCH ₂ CH ₂ Cl	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.820	"	"	"	"	"	"	N	
2.821	"	"	"	"	OMe	Me	N	
2.822	"	"	"	"	OMe	Cl	CH	
2.823	"	"	"	"	Me	Me	CH	
2.824	"	"	"	"	SMe	NEt ₂	N	
2.825	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.826	"	"	"	"	OMe	OMe	CH	
2.827	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.828	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.829	"	"	"	H	OMe	Me	N	

TABLE 1-continued



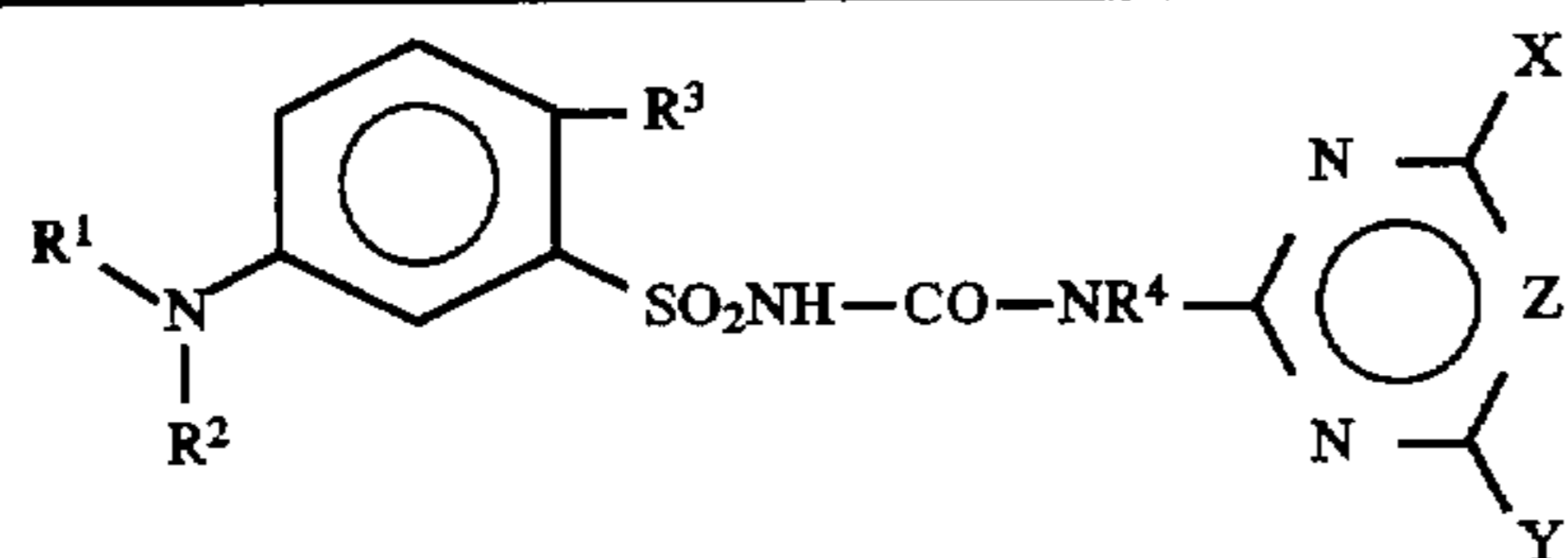
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.830	"	"	"	"	Me	Me	CH	
2.831	"	"	"	"	Cl	OMe	CH	
2.832	"	"	"	Me	OMe	OMe	CH	
2.833	"	"	"	"	OMe	Me	N	
2.834	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.835	"	"	"	"	OMe	Me	CH	
2.836	"	"	"	"	Cl	OMe	CH	
2.837	"	"	"	"	OMe	Me	N	
2.838	"	"	"	Me	OMe	OMe	CH	
2.839	"	"	"	"	"	Me	N	
2.840	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.841	"	"	"	H	OMe	Me	N	
2.842	"	"	"	"	OMe	Cl	CH	
2.843	"	"	"	"	Me	Me	CH	
2.844	"	"	"	Me	OMe	OMe	CH	
2.845	"	"	"	"	OMe	Me	N	
2.846	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.847	"	"	"	H	OMe	Me	N	
2.848	"	"	"	"	Me	Me	CH	
2.849	"	"	"	Me	OMe	Me	N	
2.850	n-Pr	CO-NH-CH ₂ CH ₂ Cl	CO ₂ Me	H	OMe	OMe	CH	
2.851	"	"	"	"	"	Cl	CH	
2.852	"	"	"	"	Me	Me	CH	
2.853	"	"	"	"	OMe	Me	N	
2.854	"	"	"	Me	OMe	OMe	CH	
2.855	"	"	"	"	OMe	Me	N	
2.856	n-Pr	"	CO ₂ -Et	H	"	"	N	
2.857	"	"	"	"	"	OMe	CH	
2.858	"	"	"	"	Me	Me	CH	
2.859	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.860	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.861	"	"	"	"	OMe	Me	N	
2.862	"	"	"	"	Me	Me	CH	
2.863	"	"	"	"	Cl	OMe	N	
2.864	"	"	"	Me	OMe	Me	N	
2.865	"	"	"	"	"	OMe	CH	
2.866	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.867	"	"	"	"	"	Cl	CH	
2.868	"	"	"	"	Me	Me	CH	
2.869	"	"	"	"	OMe	Me	N	
2.870	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.871	"	"	CO ₂ -n-Pr	"	"	"	CH	
2.872	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.873	Me	CO-OCH ₂ CCl ₃	CO ₂ -Me	H	OMe	OMe	CH	
2.874	"	"	"	"	"	OMe	N	
2.875	"	"	"	"	"	Me	N	
2.876	"	"	"	"	"	"	CH	
2.877	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.878	"	"	"	"	Me	Me	CH	
2.879	"	"	"	"	"	"	N	
2.880	"	"	"	"	Cl	OMe	CH	
2.881	"	"	"	Me	OMe	OMe	CH	
2.882	"	"	"	"	"	Me	N	
2.883	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.884	"	"	"	"	"	Cl	CH	
2.885	"	"	"	"	Me	Me	CH	
2.886	"	"	"	"	OMe	Me	N	
2.887	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.888	"	"	"	Me	OMe	OMe	CH	
2.889	"	"	"	"	OMe	Me	N	
2.890	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.891	"	"	"	"	"	"	N	
2.892	"	"	"	"	OMe	Me	N	
2.893	"	"	"	"	Me	Me	CH	
2.894	"	"	"	"	OMe	Cl	CH	
2.895	"	"	"	Me	Me	OMe	N	
2.896	"	"	"	"	OMe	OMe	CH	

TABLE 1-continued



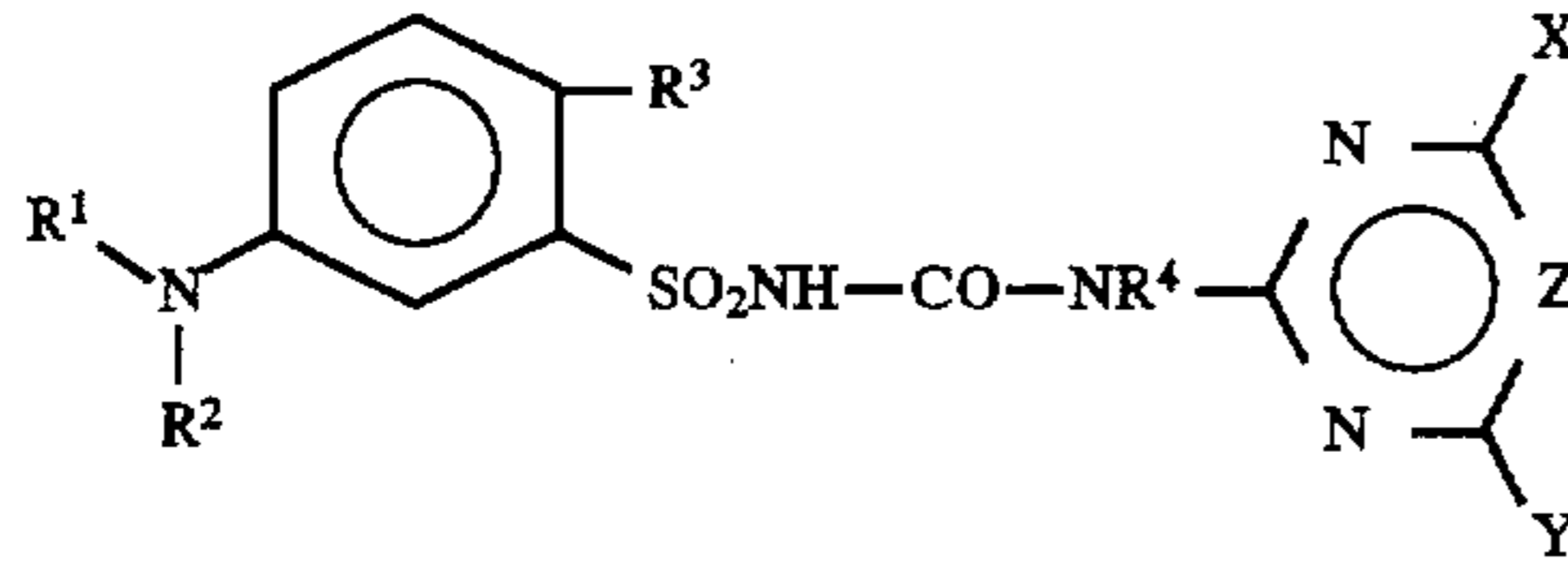
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
2.897	Me	CO-OCH ₂ CCl ₃	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.898	"	"	"	"	"	"	N	
2.899	"	"	"	"	OMe	Me	N	
2.900	"	"	"	"	OMe	Cl	CH	
2.901	"	"	"	"	Me	Me	CH	
2.902	"	"	"	"	SMe	NEt ₂	N	
2.903	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
2.904	"	"	"	"	OMe	OMe	CH	
2.905	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
2.906	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
2.907	"	"	"	H	OMe	Me	N	
2.908	"	"	"	"	Me	Me	CH	
2.909	"	"	"	"	Cl	OMe	CH	
2.910	"	"	"	Me	OMe	OMe	CH	
2.911	"	"	"	"	OMe	Me	N	
2.912	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.913	"	"	"	"	OMe	Me	CH	
2.914	"	"	"	"	Cl	OMe	CH	
2.915	"	"	"	"	OMe	Me	N	
2.916	"	"	"	Me	OMe	OMe	CH	
2.917	"	"	"	"	"	Me	N	
2.918	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.919	"	"	"	"	OMe	Me	N	
2.920	"	"	"	"	OMe	Cl	CH	
2.921	"	"	"	"	Me	Me	CH	
2.922	"	"	"	Me	OMe	OMe	CH	
2.923	"	"	"	"	OMe	Me	N	
2.924	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
2.925	"	"	"	"	OMe	Me	N	
2.926	"	"	"	"	Me	Me	CH	
2.927	"	"	"	Me	OMe	Me	N	
2.928	n-Pr	CO-OCH ₂ CCl ₃	CO ₂ -Me	H	OMe	OMe	CH	
2.929	"	"	"	"	"	Cl	CH	
2.930	"	"	"	"	Me	Me	CH	
2.931	"	"	"	"	OMe	Me	N	
2.932	"	"	"	Me	OMe	OMe	CH	
2.933	"	"	"	"	OMe	Me	N	
2.934	n-Pr	"	CO ₂ -Et	H	OMe	Me	N	
2.935	"	"	"	"	"	OMe	CH	
2.936	"	"	"	"	Me	Me	CH	
2.937	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
2.938	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
2.939	"	"	"	"	OMe	Me	N	
2.940	"	"	"	"	Me	Me	CH	
2.941	"	"	"	"	Cl	OMe	N	
2.942	"	"	"	Me	OMe	Me	N	
2.943	"	"	"	"	"	OMe	CH	
2.944	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
2.945	"	"	"	"	"	Cl	CH	
2.946	"	"	"	"	Me	Me	CH	
2.947	"	"	"	"	OMe	Me	N	
2.948	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.949	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
2.950	"	"	CO ₂ -i-Pr	"	"	"	CH	
2.951	Me	COCH ₂ Br	CO ₂ -Me	H	OMe	OMe	CH	155-161
2.952	"	"	"	"	"	OMe	N	
2.953	"	"	"	"	"	Me	N	
2.954	"	"	"	"	"	"	CH	
2.955	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
2.956	"	"	"	"	Me	Me	CH	
2.957	"	"	"	"	"	"	N	
2.958	"	"	"	"	Cl	OMe	CH	
2.959	"	"	"	Me	OMe	OMe	CH	
2.960	"	"	"	"	"	Me	N	
2.961	"	"	CO ₂ -Et	H	OMe	OMe	CH	
2.962	"	"	"	"	"	Cl	CH	
2.963	"	"	"	"	Me	Me	CH	
2.964	"	"	"	"	OMe	Me	N	

TABLE 1-continued



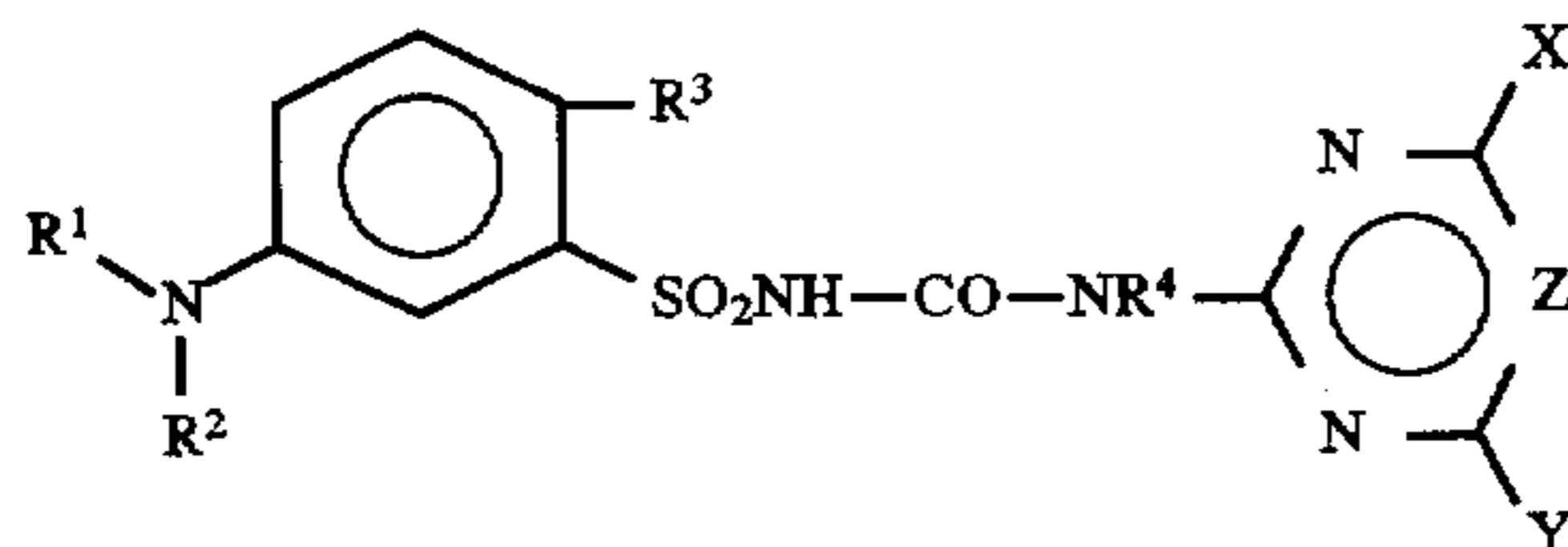
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
3.033	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.034	"	"	"	"	Me	Me	CH	
3.035	"	"	"	"	"	"	N	
3.036	"	"	"	"	Cl	OMe	CH	
3.037	"	"	"	Me	OMe	OMe	CH	
3.038	"	"	"	"	"	Me	N	
3.039	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.040	"	"	"	"	"	Cl	CH	
3.041	"	"	"	"	Me	Me	CH	
3.042	"	"	"	"	OMe	Me	N	
3.043	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.044	"	"	"	Me	OMe	OMe	CH	
3.045	"	"	"	"	OMe	Me	N	
3.046	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.047	"	"	"	"	"	"	N	
3.048	"	"	"	"	OMe	Me	N	
3.049	"	"	"	"	Me	Me	CH	
3.050	"	"	"	"	OMe	Cl	CH	
3.051	"	"	"	Me	Me	OMe	N	
3.052	"	"	"	"	OMe	OMe	CH	
3.053	Me	COCCl ₃	CO ₂ -i-Pr	H	OMe	OMe	CH	
3.054	"	"	"	"	"	"	N	
3.055	"	"	"	"	OMe	Me	N	
3.056	"	"	"	"	OMe	Cl	CH	
3.057	"	"	"	"	Me	Me	CH	
3.058	"	"	"	"	SMe	NEt ₂	N	
3.059	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
3.060	"	"	"	"	OMe	OMe	CH	
3.061	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
3.062	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
3.063	"	"	"	H	OMe	Me	N	
3.064	"	"	"	"	Me	Me	CH	
3.065	"	"	"	"	Cl	OMe	CH	
3.066	"	"	"	Me	OMe	OMe	CH	
3.067	"	"	"	"	OMe	Me	N	
3.068	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.069	"	"	"	"	OMe	Me	CH	
3.070	"	"	"	"	Cl	OMe	CH	
3.071	"	"	"	"	OMe	Me	N	
3.072	"	"	"	Me	OMe	OMe	CH	
3.073	"	"	"	"	"	Me	N	
3.074	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.075	"	"	"	"	OMe	Me	N	
3.076	"	"	"	"	OMe	Cl	CH	
3.077	"	"	"	"	Me	Me	CH	
3.078	"	"	"	Me	OMe	OMe	CH	
3.079	"	"	"	"	OMe	Me	N	
3.080	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
3.081	"	"	"	"	OMe	Me	N	
3.082	"	"	"	"	Me	Me	CH	
3.083	"	"	"	Me	OMe	Me	N	
3.084	n-Pr	COCCl ₃	CO ₂ -Me	H	OMe	OMe	CH	
3.085	"	"	"	"	"	Cl	CH	
3.086	"	"	"	"	Me	Me	CH	
3.087	"	"	"	"	OMe	Me	N	
3.088	"	"	"	Me	OMe	OMe	CH	
3.089	"	"	"	"	OMe	Me	N	
3.090	n-Pr	"	CO ₂ -Et	H	"	"	N	
3.091	"	"	"	"	"	OMe	CH	
3.092	"	"	"	"	Me	Me	CH	
3.093	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
3.094	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
3.095	"	"	"	"	OMe	Me	N	
3.096	"	"	"	"	Me	Me	CH	
3.097	"	"	"	"	Cl	OMe	N	
3.098	"	"	"	Me	OMe	Me	N	
3.099	"	"	"	"	"	OMe	CH	
3.100	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	

TABLE 1-continued



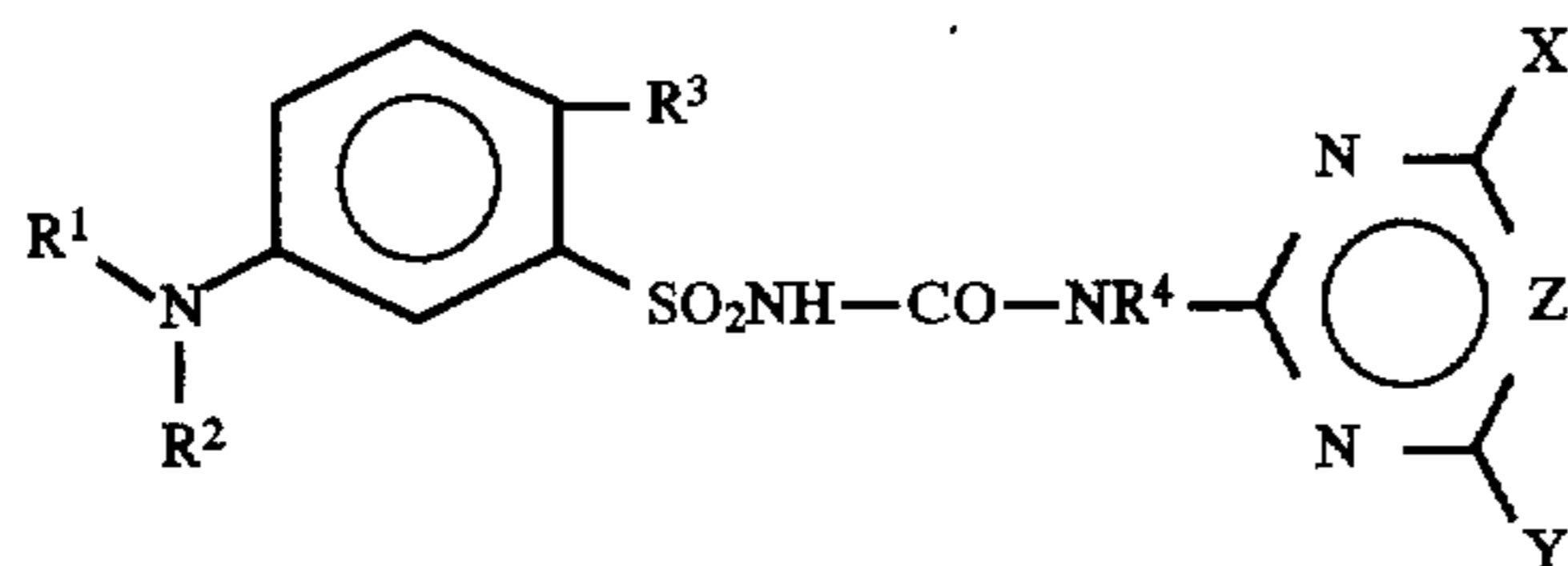
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
3.101	"	"	"	"	"	Cl	CH	
3.102	"	"	"	"	Me	Me	CH	
3.103	"	"	"	"	OMe	Me	N	
3.104	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.105	"	"	CO ₂ -n-Pr	"	"	"	CH	
3.106	"	"	CO ₂ -i-Pr	"	"	"	CH	
3.107	Me	COCHCl ₂	CO ₂ -Me	H	OMe	OMe	CH	
3.108	"	"	"	"	"	OMe	N	
3.109	"	"	"	"	"	Me	N	
3.110	"	"	"	"	"	"	CH	
3.111	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.112	"	"	"	"	Me	Me	CH	
3.113	"	"	"	"	"	"	N	
3.114	"	"	"	"	Cl	OMe	CH	
3.115	"	"	"	Me	OMe	OMe	CH	
3.116	"	"	"	"	"	Me	N	
3.117	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.118	"	"	"	"	"	Cl	CH	
3.119	"	"	"	"	Me	Me	CH	
3.120	"	"	"	"	OMe	Me	N	
3.121	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.122	"	"	"	Me	OMe	OMe	CH	
3.123	"	"	"	"	OMe	Me	N	
3.124	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.125	"	"	"	"	"	"	N	
3.126	"	"	"	"	OMe	Me	N	
3.127	"	"	"	"	Me	Me	CH	
3.128	"	"	"	"	OMe	Cl	CH	
3.129	"	"	"	Me	Me	OMe	N	
3.130	"	"	"	"	OMe	OMe	CH	
3.131	Me	COCHCl ₂	CO ₂ -i-Pr	H	OMe	OMe	CH	
3.132	"	"	"	"	"	"	N	
3.133	"	"	"	"	OMe	Me	N	
3.134	"	"	"	"	OMe	Cl	CH	
3.135	"	"	"	"	Me	Me	CH	
3.136	"	"	"	"	SMe	NMe ₂	N	
3.137	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
3.138	"	"	"	"	OMe	OMe	CH	
3.139	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
3.140	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
3.141	"	"	"	H	OMe	Me	N	
3.142	"	"	"	"	Me	Me	CH	
3.143	"	"	"	"	Cl	OMe	CH	
3.144	"	"	"	Me	OMe	OMe	CH	
3.145	"	"	"	"	OMe	Me	N	
3.146	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.147	"	"	"	"	OMe	Me	CH	
3.148	"	"	"	"	Cl	OMe	CH	
3.149	"	"	"	"	OMe	Me	N	
3.150	"	"	"	Me	OMe	OMe	CH	
3.151	"	"	"	"	"	Me	N	
3.152	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.153	"	"	"	"	OMe	Me	N	
3.154	"	"	"	"	OMe	Cl	CH	
3.155	"	"	"	"	Me	Me	CH	
3.156	"	"	"	Me	OMe	OMe	CH	
3.157	"	"	"	"	OMe	Me	N	
3.158	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
3.159	"	"	"	"	OMe	Me	N	
3.160	"	"	"	"	Me	Me	CH	
3.161	"	"	"	Me	OMe	Me	N	
3.162	n-Pr	COCHCl ₂	CO ₂ -Me	H	OMe	OMe	CH	
3.163	"	"	"	"	"	Cl	CH	
3.164	"	"	"	"	Me	Me	CH	
3.165	"	"	"	"	OMe	Me	N	
3.166	"	"	"	Me	OMe	OMe	CH	
3.167	"	"	"	"	OMe	Me	N	
3.168	n-Pr	"	CO ₂ -Et	H	"	"	N	

TABLE 1-continued



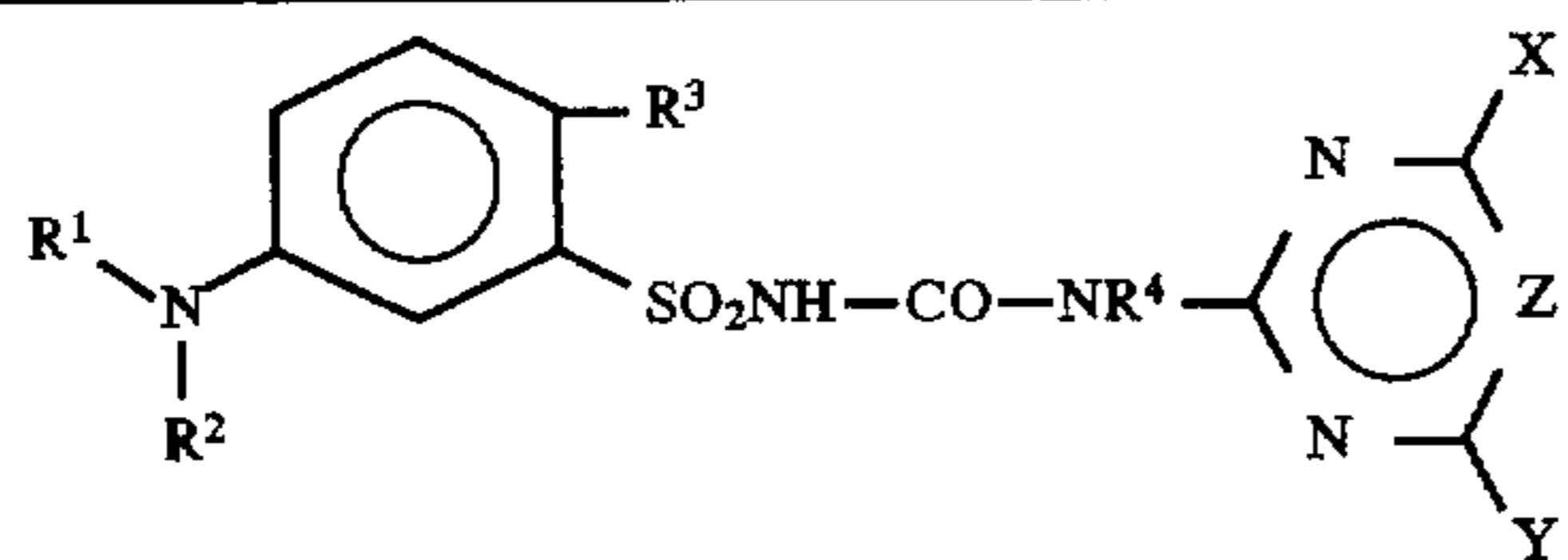
No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
3.169	"	"	"	"	"	OMe	CH	
3.170	"	"	"	"	Me	Me	CH	
3.171	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
3.172	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
3.173	"	"	"	"	OMe	Me	N	
3.174	"	"	"	"	Me	Me	CH	
3.175	"	"	"	"	Cl	OMe	N	
3.176	"	"	"	Me	OMe	Me	N	
3.177	"	"	"	"	"	OMe	CH	
3.178	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
3.179	"	"	"	"	"	Cl	CH	
3.180	"	"	"	"	Me	Me	CH	
3.181	"	"	"	"	OMe	Me	N	
3.182	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.183	"	"	CO ₂ -n-Pr	"	"	"	CH	
3.184	"	"	CO ₂ -i-Pr	"	"	"	CH	
3.185	Me	COCH ₂ Cl	CO ₂ -Me	H	OMe	OMe	CH	
3.186	"	"	"	"	"	OMe	N	
3.187	"	"	"	"	"	Me	N	
3.188	"	"	"	"	"	"	CH	
3.189	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.190	"	"	"	"	Me	Me	CH	
3.191	"	"	"	"	"	"	N	
3.192	"	"	"	"	Cl	OMe	CH	
3.193	"	"	"	Me	OMe	OMe	CH	
3.194	"	"	"	"	"	Me	N	
3.195	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.196	"	"	"	"	"	Cl	CH	
3.197	"	"	"	"	Me	Me	CH	
3.198	"	"	"	"	OMe	Me	N	
3.199	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.200	"	"	"	Me	OMe	OMe	CH	
3.201	"	"	"	"	OMe	Me	N	
3.202	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.203	"	"	"	"	"	"	N	
3.204	"	"	"	"	OMe	Me	N	
3.205	"	"	"	"	Me	Me	CH	
3.206	"	"	"	"	OMe	Cl	CH	
3.207	"	"	"	Me	Me	OMe	N	
3.208	"	"	"	"	OMe	OMe	CH	
3.209	Me	COCH ₂ Cl	CO ₂ -i-Pr	H	OMe	OMe	CH	
3.210	"	"	"	"	"	"	N	
3.211	"	"	"	"	OMe	Me	N	
3.212	"	"	"	"	OMe	Cl	CH	
3.213	"	"	"	"	Me	Me	CH	
3.214	"	"	"	"	SMe	NEt ₂	N	
3.215	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
3.216	"	"	"	"	OMe	OMe	CH	
3.217	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
3.218	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
3.219	"	"	"	H	OMe	Me	N	
3.220	"	"	"	"	Me	Me	CH	
3.221	"	"	"	"	Cl	OMe	CH	
3.222	"	"	"	Me	OMe	OMe	CH	
3.223	"	"	"	"	OMe	Me	N	
3.224	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.225	"	"	"	"	OMe	Me	CH	
3.226	"	"	"	"	Cl	OMe	CH	
3.227	"	"	"	"	OMe	Me	N	
3.228	"	"	"	Me	OMe	OMe	CH	
3.229	"	"	"	"	"	Me	N	
3.230	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.231	"	"	"	"	OMe	Me	N	
3.232	"	"	"	"	OMe	Cl	CH	
3.233	"	"	"	"	Me	Me	CH	
3.234	"	"	"	Me	OMe	OMe	CH	
3.235	"	"	"	"	OMe	Me	N	
3.236	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	

TABLE 1-continued



No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
3.237	"	"	"	"	OMe	Me	N	
3.238	"	"	"	"	Me	Me	CH	
3.239	"	"	"	Me	OMe	Me	N	
3.240	n-Pr	COCH ₂ Cl	CO ₂ -Me	H	OMe	OMe	CH	
3.241	"	"	"	"	"	Cl	CH	
3.242	"	"	"	"	Me	Me	CH	
3.243	"	"	"	"	OMe	Me	N	
3.244	"	"	"	Me	OMe	OMe	CH	
3.245	"	"	"	"	OMe	Me	N	
3.246	n-Pr	"	CO ₂ -Et	H	"	"	N	
3.247	"	"	"	"	"	OMe	CH	
3.248	"	"	"	"	Me	Me	CH	
3.249	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
3.250	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
3.251	"	"	"	"	OMe	Me	N	
3.252	"	"	"	"	Me	Me	CH	
3.253	"	"	"	"	Cl	OMe	N	
3.254	"	"	"	Me	OMe	Me	N	
3.255	"	"	"	"	"	OMe	CH	
3.256	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
3.257	"	"	"	"	"	Cl	CH	
3.258	"	"	"	"	Me	Me	CH	
3.259	"	"	"	"	OMe	Me	N	
3.260	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.261	"	"	CO ₂ -n-Pr	"	"	"	CH	
3.262	"	"	CO ₂ -i-Pr	"	"	"	CH	
3.263	Me	COCF ₃	CO ₂ Me	H	OMe	OMe	CH	
3.264	"	"	"	"	"	OMe	N	
3.265	"	"	"	"	"	Me	N	
3.266	"	"	"	"	"	"	CH	
3.267	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.268	"	"	"	"	Me	Me	CH	
3.269	"	"	"	"	"	"	N	
3.270	"	"	"	"	Cl	OMe	CH	
3.271	"	"	"	Me	OMe	OMe	CH	
3.272	"	"	"	"	"	Me	N	
3.273	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.274	"	"	"	"	"	Cl	CH	
3.275	"	"	"	"	Me	Me	CH	
3.276	"	"	"	"	OMe	Me	N	
3.277	"	"	"	"	NMe ₂	OCH ₂ CF ₃	N	
3.278	"	"	"	Me	OMe	OMe	CH	
3.279	"	"	"	"	OMe	Me	N	
3.280	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.281	"	"	"	"	"	"	N	
3.282	"	"	"	"	OMe	Me	N	
3.283	"	"	"	"	Me	Me	CH	
3.284	"	"	"	"	OMe	Cl	CH	
3.285	"	"	"	Me	Me	OMe	N	
3.286	"	"	"	"	OMe	OMe	CH	
3.287	Me	COCF ₃	CO ₂ -i-Pr	H	OMe	OMe	CH	
3.288	"	"	"	"	"	"	N	
3.289	"	"	"	"	OMe	Me	N	
3.290	"	"	"	"	OMe	Cl	CH	
3.291	"	"	"	"	Me	Me	CH	
3.292	"	"	"	"	SMe	NEt ₂	N	
3.293	"	"	CO ₂ -i-Pr	Me	OMe	Me	N	
3.294	"	"	"	"	OMe	OMe	CH	
3.295	Me	"	CO ₂ -Allyl	H	OMe	OMe	CH	
3.296	Et	"	CO ₂ -Me	H	OMe	OMe	CH	
3.297	"	"	"	H	OMe	Me	N	
3.298	"	"	"	"	Me	Me	CH	
3.299	"	"	"	"	Cl	OMe	CH	
3.300	"	"	"	Me	OMe	OMe	CH	
3.301	"	"	"	"	OMe	Me	N	
3.302	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.303	"	"	"	"	OMe	Me	CH	
3.304	"	"	"	"	Cl	OMe	CH	

TABLE 1-continued



No.	R ¹	R ²	R ³	R ⁴	X	Y	Z	m.p.
3.305	"	"	"	"	OMe	Me	N	
3.306	"	"	"	Me	OMe	OMe	CH	
3.307	"	"	"	"	"	Me	N	
3.308	"	"	CO ₂ -n-Pr	H	OMe	OMe	CH	
3.309	"	"	"	"	OMe	Me	N	
3.310	"	"	"	"	OMe	Cl	CH	
3.311	"	"	"	"	Me	Me	CH	
3.312	"	"	"	Me	OMe	OMe	CH	
3.313	"	"	"	"	OMe	Me	N	
3.314	"	"	CO ₂ -i-Pr	H	OMe	OMe	CH	
3.315	"	"	"	"	OMe	Me	N	
3.316	"	"	"	"	Me	Me	CH	
3.317	"	"	"	Me	OMe	Me	N	
3.318	n-Pr	COCF ₃	CO ₂ -Me	H	OMe	OMe	CH	
3.319	"	"	"	"	"	Cl	CH	
3.320	"	"	"	"	Me	Me	CH	
3.321	"	"	"	"	OMe	Me	N	
3.322	"	"	"	Me	OMe	OMe	CH	
3.323	"	"	"	"	OMe	Me	N	
3.324	n-Pr	"	CO ₂ -Et	H	"	"	N	
3.325	"	"	"	"	"	OMe	CH	
3.326	"	"	"	"	Me	Me	CH	
3.327	"	"	CO ₂ -n-Pr	"	OMe	OMe	CH	
3.328	i-Pr	"	CO ₂ -Me	H	OMe	OMe	CH	
3.329	"	"	"	"	OMe	Me	N	
3.330	"	"	"	"	Me	Me	CH	
3.331	"	"	"	"	Cl	OMe	N	
3.332	"	"	"	Me	OMe	Me	N	
3.333	"	"	"	"	"	OMe	CH	
3.334	Allyl	"	CO ₂ -Me	H	OMe	OMe	CH	
3.335	"	"	"	"	"	Cl	CH	
3.336	"	"	"	"	Me	Me	CH	
3.337	"	"	"	"	OMe	Me	N	
3.338	"	"	CO ₂ -Et	H	OMe	OMe	CH	
3.339	"	"	n-Pr	"	"	"	CH	
3.340	"	"	i-Pr	"	"	"	CH	
3.341	Me	COCH ₃	CHO	"	"	"	CH	
3.342	"	CO ₂ CH ₃	"	"	"	"	CH	
3.343	"	COCH ₃	CO-CH ₃	"	"	"	CH	
3.344	"	CO ₂ CH ₃	"	"	"	"	CH	
3.345	"	CO-CH ₃	CO-S-i-Pr	"	"	"	CH	
3.346	"	CO ₂ Et	"	"	"	"	CH	
3.347	"	CHO	CONMe ₂	"	"	"	CH	180-181
3.348	"	"	"	"	OMe	Me	N	
3.349	"	COCH ₃	"	"	OMe	OMe	CH	174-175
3.350	"	"	CONH ₂	"	"	"	CH	
3.351	"	COCH ₃	CS-NMe ₂	"	OMe	OMe	CH	
3.352	"	CO ₂ Et	"	"	"	"	CH	
3.353	"	CO-CH ₂ CH ₃	"	"	"	"	CH	
3.354	"	CO ₂ Me	CS-O-i-Pr	"	"	"	CH	
3.355	"	CHO	"	"	"	"	CH	
3.356	"	"	C(=N-NMe ₂)	"	"	"	CH	
3.357	Me	CO-CH ₃	C(=N-OMe)OMe	H	OMe	OMe	CH	
3.358	"	CO ₂ CH ₃	H	"	"	"	CH	
3.359	"	CHO	"	"	"	"	CH	
3.360	"	"	C(=NOH)H	"	"	"	CH	
3.361	"	CO ₂ Me	"	"	"	"	CH	
3.362	"	COCH ₃	C(=NOMe)H	"	"	"	CH	
3.363	"	"	CO ₂ H	"	"	"	CH	
3.364	"	CO ₂ Me	"	"	"	"	CH	
3.365	"	COCH ₃	C(=N-Et)OMe	"	"	"	CH	
3.366	"	"	C(=N-i-Pr)H	"	"	"	CH	
3.367	"	CO ₂ CH ₂ CH ₂ Cl	COOMe	H	OMe	OMe	CH	141-143
3.368	Me	CO ₂ CH ₂ CH ₂ Cl	COOMe	H	OCH ₂ CF ₃	NMe ₂	N	123-126
3.369	Me	COCH ₂ CH ₃	CONMe ₂	H	OMe	OMe	CH	159-161
3.370	Me	COOMe	CONMe ₂	H	OMe	OMe	CH	133
3.371	Me	CO- ⁿ C ₄ H ₉	COOMe	H	OMe	OMe	CH	189-191

B) FORMULATION EXAMPLES

a) A dusting agent is obtained by mixing 10 parts by weight of a compound of the formula (I) and 90 parts by weight of talc as inert substance, and comminuting them in an impact mill.

b) A wettable powder which is easily dispersible in water is obtained by mixing 25 parts by weight of a compound of the formula (I), 64 parts by weight of kaolin-containing quartz as inert substance, 10 parts by weight of potassium ligninsulfonate and part by weight of sodium oleoylmethyltaurine as wetting and dispersing agent, and milling them in a pin mill.

c) A dispersion concentrate which is easily dispersible in water is obtained by mixing 20 parts by weight of a compound of the formula (I) with 6 parts by weight of alkylphenol polyglycol ether (®Triton X 207), 3 parts by weight of isotridecanol polyglycol ether (8 EO) and 71 parts by weight of paraffinic mineral oil (boiling range e.g. about 255° to over 277° C.) and milling them in an attrition ball mill to a fineness of less than 5 microns.

d) An emulsifiable concentrate is obtained from 15 parts by weight of a compound of the formula (I), 75 parts by weight of cyclohexanone as solvent and 10 parts by weight of ethoxylated nonylphenol as emulsifier.

e) Water-dispersible granules are obtained by mixing 75 parts by weight of a compound of the formula (I), 10 parts by weight of calcium ligninsulfonate, 5 parts by weight of sodium lauryl sulfate, 3 parts by weight of polyvinyl alcohol and 7 parts by weight of kaolin, milling them in a pin mill and granulating the powder in a fluidized bed, spraying on water as the granulation fluid.

c) BIOLOGICAL EXAMPLES

1. Pre-emergence action on weeds

Seeds and/or pieces of rhizome of mono- and dicotyledon weeds were planted in plastic pots in sandy loam soil and covered with earth. The compounds according to the invention, formulated as wettable powders or emulsifiable concentrates, were then applied as an aqueous suspension or emulsion at an equivalent water application rate of 600 to 800 l/ha in different, metered amounts to the surface of the covering earth.

After treatment, the pots are placed in a greenhouse and maintained under good growth conditions for the weeds. The visual assessment of the plants and/or the emergence damage is made following the emergence of the test plants after a test period of 3 to 4 weeks, in comparison to untreated controls. As the test results show, the compounds according to the invention display a good herbicidal pre-emergence activity against a broad spectrum of graminaceous and other weeds. For example, the compounds from Examples 12, 13, 15, 16, 18, 44, 89, 90, 91, 92, 93, 94, 96, 122, 167, 170, 173, 175, 246, 322, 324, 325, 327, 477, 555, 945, 1.023, 1.178, 1.256, 1.334, 1.802, 2.192, 2.270, 2.715, 2.951, 3.347, 3.349, 3.367, 3.368, 3.369, 3.370 and 3.371 from Table 1 have a very good herbicidal action against harmful plants such as *Sinapis alba*, *Chrysanthemum segetum*, *Avena sativa*, *Stellaria media*, *Echinochloa crus-galli* and *Lolium multiflorum* in the pre-emergence method at an application rate of 0.3 kg or less of active substance per hectare.

2. Post-emergence action on weeds

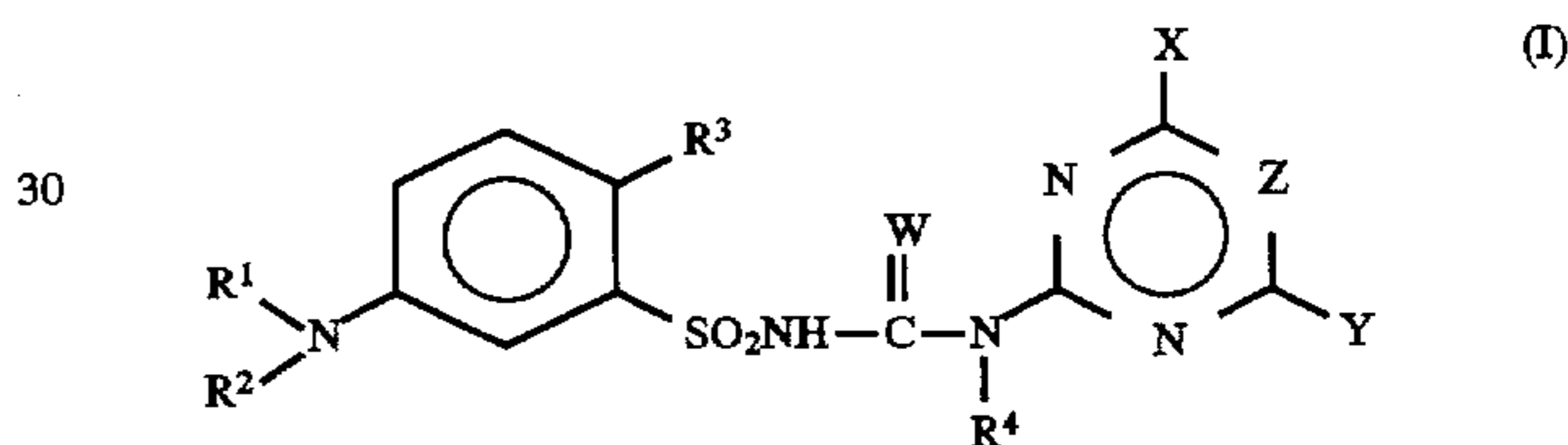
Seeds and/or pieces of rhizome from mono- and dicotyledon weeds were placed in plastic pots in sandy loam soil,

covered with earth and cultivated in a greenhouse under good growth conditions. Three weeks after being sown, the test plants were treated at the three-leaf stage.

The compounds according to the invention, formulated as wettable powders or as emulsifiable concentrates, were sprayed in different, metered amounts at an equivalent water application rate of 600 to 800 l/ha onto the green parts of the plants: after a 3- to 4-week standing time of the test plants in a greenhouse under optimum growth conditions, the activity of the formulations was assessed visually in comparison to untreated controls. Applied post-emergence, too, the agents according to the invention display a good herbicidal activity against a broad spectrum of economically significant graminaceous and other weeds. For example, the compounds of Examples 12, 13, 15, 16, 18, 44, 89, 90, 91, 92, 93, 94, 96, 122, 167, 170, 173, 175, 246, 322, 324, 325, 327, 477, 555, 945, 1.023, 1.178, 1.256, 1.334, 1.802, 2.192, 2.270, 2.715, 2.951, 3.347, 3.349, 3.367, 3.368, 3.369, 3.370 and 3.371 from Table 1 have a very good herbicidal action against harmful plants such as *Sinapis alba*, *Stellaria media*, *Echinochloa crus-galli*, *Lolium multiflorum*, *Chrysanthemum segetum* and *Avena sativa* in the post-emergence method at an application rate of 0.3 kg or less of active substance per hectare.

We claim:

1. A compound of the formula (I) or a salt thereof



in which

R^1 is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkoxy, $CONH_2$, C_1-C_4 -alkylthio, CN, CHO, (C_1-C_6 -alkyl) carbonyl, (C_3-C_6 -cycloalkyl)carbonyl, C_1-C_4 -alkylsulfonyl, carboxyl, (C_1-C_4 -alkoxy)carbonyl, (C_2-C_4 -alkenyloxy)carbonyl, (C_2-C_4 -alkynyloxy)carbonyl, NO_2 , NH_2 , mono- and di- (C_1-C_6 -alkylamino),

R^2 is $CO-R^5$, $COO-R^5$, $CO-SR^7$, $CO-NR^8R^9$, $CS-NR^{10}R^{11}$, $CS-OR^{12}$, $CS-SR^{13}$, SO_2R^{14} , $SO_2NR^{15}R^{16}$,

R^3 is COR^{17} , $CO-OR^{18}$, $CO-NR^{19}R^{20}$, $CO-SR^{21}$, $COO-N=CR^{22}R^{23}$, CSR^{24} , $CSSR^{25}$, $CS-OR^{26}$, $CS-NR^{27}R^{28}$, $C(=NR^{29})R^{30}$,

R^4 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more halogen radicals,

R^5 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group, consisting of halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or unsubstituted or substituted C_3-C_8 -cycloalkyl, unsubstituted or substituted phenyl, pyridyl, pyrimidinyl, pyridazinyl, pyrazinyl, thienyl, thiazolyl, oxazolyl, furyl, pyrrolyl, pyrazolyl or imidazolyl, where each of the eleven last-mentioned radicals is unsubstituted or substituted by one or more radicals from the group consisting of C_1-C_4 -alkyl,

C_1-C_4 -alkoxy and halogen or phenyl- C_1-C_4 -alkyl which is unsubstituted or substituted on the phenyl ring.

R^6 is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or C_3-C_6 -cycloalkyl which is unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkyl and C_1-C_4 -alkoxy, or C_3-C_6 -cycloalkyl- C_1-C_3 -alkyl.

R^7 is selected from the group of radicals as defined in R^6 ,

R^8 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, or (C_1-C_6 -alkoxy)carbonyl or C_1-C_4 -alkoxy,

R^9 is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or $CO-R^{33}$, $CO-OR^{34}$, $CO-NR^{35}R^{36}$, $CS-NR^{35}R^{36}$, $CS-R^{33}$ or $CS-OR^{34}$, or

R^8 , R^9 taken together are a divalent radical of the formula $-(CH_2)_4-$, $-(CH_2)_5-$, $-CH_2CH_2-O-CH_2CH_2-$, $-CH_2CH_2NHCH_2CH_2-$, the 4 latter radicals being unsubstituted or substituted by C_1-C_4 -alkyl.

R^{10} is selected from the group of radicals as defined in R^8 ,

R^{11} is selected from the group of radicals as defined in R^9 ,

R^{12} is selected from the group of radicals as defined in R^6 ,

R^{13} is selected from the group of radicals as defined in R^6 ,

R^{14} is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$,

R^{15} is selected from the group of radicals as defined in R^8 ,

R^{16} is H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more halogen radicals,

R^{17} is selected from the group of radicals as defined in R^5 ,

R^{18} is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the three latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkoxy, C_1-C_4 -alkylthio and $NR^{31}R^{32}$, or C_3-C_6 -cycloalkyl which is unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkyl and C_1-C_4 -alkoxy, or C_3-C_6 -cycloalkyl- C_1-C_3 -alkyl or H.

R^{19} is selected from the group of radicals as defined in R^8 ,

R^{20} is selected from the group of radicals as defined in R^9 ,

R^{21} is selected from the group of radicals as defined in R^{18} ,

R^{22} is H, C_1-C_4 -alkyl, C_3-C_5 -alkenyl or C_3-C_5 -alkynyl,

R^{23} is H, C_1-C_4 -alkyl, C_3-C_5 -alkenyl or C_3-C_5 -alkynyl,

R^{24} is selected from the group of radicals as defined in R^{17} ,

R^{25} is selected from the group of radicals as defined in R^{18} .

R^{26} is selected from the group of radicals as defined in R^{18} ,

R^{27} is selected from the group of radicals as defined in R^8 ,

R^{28} is selected from the group of radicals as defined in R^9 ,

R^{29} is H, OH, NH_2 , NHR^{37} , $N(R^{37})_2$, C_1-C_4 -alkyl, C_1-C_4 -alkoxy, C_2-C_4 -alkenyl or C_2-C_4 -alkynyl, the 4 latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_3 -alkoxy and C_1-C_3 -alkylthio,

R^{30} is H, C_1-C_6 -alkyl, C_1-C_6 -alkoxy, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the four latter radicals independently of one another being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_3 -alkoxy and C_1-C_3 -alkylthio,

each

R^{31} independently of the others is H, C_1-C_4 -alkyl, (C_1-C_4 -alkyl)carbonyl, (C_1-C_4 -alkoxy)carbonyl or CHO,

each

R^{32} independently of the others is H or C_1-C_4 -alkyl,

R^{33} is selected from the group of radicals as defined in R^5 ,

R^{34} is selected from the group of radicals as defined in R^6 ,

R^{35} , R^{36} independently of one another are H, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, the 3 latter radicals independently of one another being unsubstituted or substituted by one or more halogen radicals,

R^{37} is C_1-C_4 -alkyl, C_2-C_4 -alkenyl or C_2-C_4 -alkynyl, the three radicals mentioned, independently of one another, being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkoxy and C_1-C_4 -alkylthio,

W is O or S,

X and Y independently of one another are hydrogen, halogen, C_1-C_6 -alkyl, C_1-C_6 -alkoxy or C_1-C_6 -alkylthio, the three latter radicals being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C_1-C_4 -alkoxy and C_1-C_4 -alkylthio, or mono- or di- (C_1-C_4 -alkyl)amino, C_3-C_6 -cycloalkyl, C_3-C_5 -alkenyl, C_3-C_5 -alkenyloxy or C_3-C_5 -alkynyloxy, and

Z is CH.

2. A compound or a salt thereof as claimed in claim 1, wherein

R^1 is C_1-C_4 -alkyl, C_2-C_4 -alkenyl or C_2-C_4 -alkynyl, or

R^2 is $CO-R^5$, $COOR^6$, $CO-NR^8R^9$, $CS-NR^{10}R^{11}$, SO_2R^{14} or $SO_2NR^{15}R^{16}$, or

R^3 is COR^{17} , $COOR^{18}$, $CONR^{19}R^{20}$ or $CO-ON=CR^{22}R^{23}$, or

R^4 is H, C_1-C_4 -alkyl, or

R^5 is H, C_1-C_6 -alkyl which is unsubstituted or substituted by one or more halogen atoms, or by C_1-C_4 -alkoxy, C_1-C_4 -alkylthio, or $NR^{31}R^{32}$, or is C_3-C_6 -cycloalkyl, phenyl, benzyl or pyridyl, pyrimidinyl, pyridazinyl, pyrazinyl, thienyl, thiazolyl, oxazolyl, furyl, pyrrolyl, pyrazolyl, imidazolyl, the thirteen latter radicals being unsubstituted or substituted by one or more radicals from the group consisting of C_1-C_4 -alkyl, C_1-C_4 -alkoxy and halogen, or

R^6 is C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, C_1-C_6 -haloalkyl or C_3-C_6 -cycloalkyl, or

R^7 is C_1-C_4 -alkyl,

R^8 is hydrogen, C_1-C_6 -alkyl, C_1-C_4 -haloalkyl, C_1-C_4 -alkoxy or (C_1-C_4 -alkoxy)carbonyl,

R⁹ is hydrogen, C₁-C₆-alkyl which is unsubstituted or substituted by one or more radicals from the group consisting of halogen, C₁-C₄-alkoxy and NR³¹R³², or CO—R³³, CO—OR³⁴ or CO—NR³⁵R³⁶, or

R⁸ and R⁹ taken together are a divalent radical of the formula —(CH₂)₄—, —(CH₂)₅— or —CH₂CH₂—O—CH₂CH₂—, or

R¹⁴ is C₁-C₆-alkyl or C₂-C₆-haloalkyl, or

R¹⁵, R¹⁶ independently of one another are hydrogen or C₁-C₄-alkyl, or

R¹⁷ is hydrogen or C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₃-C₆-cycloalkyl, phenyl, pyridyl, pyrimidinyl, pyridazinyl, pyrazinyl, thienyl, thiazolyl, oxazolyl, furyl, pyrrolyl, pyrazolyl, imidazolyl, the latter twelve radicals being unsubstituted or substituted, by one or more radicals from the group consisting of C₁-C₄-alkyl, C₁-C₄-alkoxy and halogen or

R¹⁸ is hydrogen, C₁-C₄-alkyl, C₂-C₆-alkenyl or C₂-C₆-alkynyl, the 3 latter radicals being unsubstituted or substituted by one or more radicals from the group consisting of halogen, C₁-C₄-alkoxy, C₁-C₄-alkylthio and NR³¹R³², or C₃-C₆-cycloalkyl or C₃-C₆-cycloalkyl-C₁-C₃-alkyl, or

R²² is hydrogen or C₁-C₂-alkyl, or

R²³ is hydrogen or C₁-C₂-alkyl, or

R²⁹ is hydrogen, hydroxyl, amino, NHCH₃, N(CH₃)₂, C₁-C₄-alkyl or C₁-C₄-alkoxy,

R³⁰ is hydrogen or C₁-C₄-alkyl, or

each

R³¹ independently of the others is H or C₁-C₄-alkyl, or

each

R³² independently of the others is H or C₁-C₄-alkyl, or

R³³ is hydrogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₃-C₆-cycloalkyl or phenyl which is unsubstituted or substituted by one or more radicals from the group consisting of halogen, C₁-C₄-alkyl and C₁-C₄-alkoxy, or

R³⁴ is C₁-C₄-alkyl, allyl, propargyl or cycloalkyl, or

R³⁵ is hydrogen or C₁-C₄-alkyl, or

R³⁶ is hydrogen or C₁-C₄-alkyl, or

X is C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-alkylthio, halogen or mono- or di-(C₁-C₂-alkyl) amino, or

Y is C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkyl or C₁-C₄-alkylthio.

3. A compound or a salt thereof as claimed in claim 1, wherein

R¹ is methyl, ethyl, n-propyl, i-propyl or allyl,

R² is CO—R⁵, COOR⁶, CO—NR⁸R⁹, CS—NR¹⁰R¹¹, SO₂R¹⁴ or SO₂NR¹⁵R¹⁶,

R⁵ is H, C₁-C₄-alkyl, C₁-C₂-haloalkyl, cyclopropyl, phenyl, benzyl or pyridyl, thienyl or furyl, where each of the 5 latter radicals are unsubstituted or substituted by one or more halogen atoms,

R⁶ is C₁-C₄-alkyl, allyl, propargyl or cyclopropyl,

R⁸ is H, C₁-C₄-alkyl, C₁-C₄-haloalkyl or (C₁-C₄-alkoxy) carbonyl,

R⁹ is H or C₁-C₄-alkyl,

R¹⁰ is H or C₁-C₄-alkyl,

R¹¹ is H or C₁-C₄-alkyl,

R¹⁴ is C₁-C₄-alkyl,

R¹⁵ is H or C₁-C₄-alkyl and

R¹⁶ is H or C₁-C₄-alkyl.

4. A herbicidal or plant growth-regulating composition, which comprises a compound of the formula (I) as claimed in claim 1 and conventional formulation auxiliaries.

5. A method of controlling harmful plants or of regulating the growth of plants, which comprises applying an effective amount of one or more compounds of the formula (I) or of salts thereof as claimed in claim 1, to the plants, parts of plants or the agricultural or industrial land.

6. A compound of formula (I) or a salt thereof as claimed in claim 1, wherein

R¹ is methyl, ethyl, n-propyl, i-propyl or allyl,

R² is formyl, acetyl, methoxycarbonyl, ethoxycarbonyl, 2 - c h l o r o e t h o x y c a r b o n y l , ethoxycarbonylaminothiocarbonyl, methylaminosulfonyl or methylsulfonyl,

R³ is methoxycarbonyl or ethoxycarbonyl,

R⁴ is hydrogen or methyl,

W is O,

X is methyl, methoxy or chloro,

Y is methyl or methoxy, and

Z is CH.

7. A compound or a salt thereof as claimed in claim 6 wherein

R¹ is methyl, ethyl, n-propyl, i-propyl or allyl,

R² is formyl, acetyl, methoxycarbonyl or ethoxycarbonyl, and

R³ is methoxycarbonyl.

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